Folk medicine in Düzce Province (Turkey)

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Abstract: The present study was conducted to collect, record, and document local knowledge of medicinal practices in Düzce, a northwestern Anatolian province. To the best of our knowledge, no comprehensive ethnobotanical study has been reported from this province. Information was acquired through semistructured interviews and personal conversations using a questionnaire and numerous guided field trips with local knowledgeable people. For quantitative analyses and comparisons, recorded data such as informant consensus factor ($F_{ic}$) and use value (UV) were calculated, respectively. As a result of extensive field studies, 122 taxa were determined as folk medicines; 76 of were wild and 46 were cultivated. The identified medicinal plants were mainly from the family Rosaceae, followed by Compositae, Apiaceae, Lamiaceae, and Solanaceae, respectively. Among the preparations used, liquid forms such as infusions (30.2%) or decoctions (16.4%) represented the most favored ways to administer medicinal plants. Dermatological disorders had the highest $F_{ic}$ score with a value of 0.75 followed by skeletomuscular ($F_{ic}$ = 0.7466), gastrointestinal ($F_{ic}$ = 0.6666), immunological ($F_{ic}$ = 0.6615), and respiratory ($F_{ic}$ = 0.6292) system disorders, among others. The most prominent medicinal plants were Urtica dioica (UV = 0.4352), Plantago major (UV = 0.3056), Rubus ulmifolius (UV = 0.2279), and Sambucus ebulus (UV = 0.2279). According to the present study, the number of people who recognize and use the wild plants of Düzce, and those of the rest of Anatolia, is steadily decreasing. The ethnobotanical knowledge cannot be passed to the next generation in its entirety if it is not properly recorded. In addition to this gradual loss of knowledge, modern information pollution and contamination via the popular media highlight the urgent need to record this precious knowledge before it is lost.

Key words: Folk medicine, Düzce, ethnobotany, Turkish medicinal plants, Turkey

1. Introduction

Herodotus (c. 484–425 BC), who is known as the father of history, drew up a map that survived and came to be known as Orbis Terrarum ad mentem Herodoti. On this map Asia was extensive, as large as Europe; however, what he referred to as Asia was Asia Minor (known as Anatolia in Turkey). His emphasis of Asia Minor was more groundbreaking than he realized; the cultural development of that region was to have a far-reaching impact on the worlds of literature, science, and medicine. Due to its location it serves as a natural bridge between Europe and Asia, and Anatolia is one of the oldest continuously inhabited regions in the world. Ancient Neolithic settlements in Anatolia such as Çatalhöyük, Çayönü, Nevali Çori, Hacilar, and Göbekli Tepe are considered to be among the earliest settlements in the world (Wheelwright, 1974).

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flora (Davis, 1965–1985; Davis et al., 1988; Güner et al., 2000; Kaya and Raynal, 2001; Yeşılada, 2002; Bulut and Yılmaz, 2010; Özhatay et al., 2015, 2017).

The cultural heritage and richness of the flora have contributed to great diversity of traditional knowledge and practices among local people who use plants in their daily lives. Globally, folk medicine constitutes an essential base for herbal drug research and contributes to the discovery of new molecular drug candidates in modern pharmaceutical research. However, as far as folk medicine is concerned, little research was undertaken in Turkey prior to 2000. The most important pioneering surveys of folk medicines of Anatolia were conducted between 1986 and 1994, and this was the result of collaboration between Turkish and Japanese researchers. The results of this research were published as a series of manuscripts (Yeşılada, 2002). Over the past decade, there has been an increase in ethnobotanical research conducted in Turkey focusing in particular on medicinal plants (Kültür, 2007; Güneş and Özhatay, 2011; Özüdoğru et al., 2011; Özgen et al., 2012; Akaydin et al., 2013; Gürdal and Kültür, 2013; Güler et al., 2015; Mü kemre et al., 2015; Özdemir and Alpinar, 2015; Polat et al., 2015; Sargin, 2015; Günbatan et al., 2016; Uzun and Kaya, 2016; Bulut et al., 2017a, 2017b; Yeşilyurt et al., 2017; Dalar et al., 2018; Sinmez et al., 2018; Tufan et al., 2018; Sargin and Büyükcengiz, 2019).

It is well known that the use of medicinal plants is in rapid decline. This decline has accelerated in recent decades mainly due to the increasing use of modern-day synthetic medicines, and there is an urgent need to record traditional knowledge of folk medicine before it is completely lost. Our research thus aims to record the remaining folk medicinal knowledge in various regions of Turkey.

Düzce Province, located in the northwest of Anatolia, an area of rich flora and diverse cultural heritage, is an important ethnobotanical resource (Doğru Koca and Yıldırımlı, 2009). It is located within square A3 according to the grid square system adopted by Davis for Flora of Turkey and the East Aegean Islands; which corresponds to the Euro-Siberian phytogeographical region (Davis, 1965–1985). Despite its culture and habitat, only one taxonomic and two minor ethnobotanical reports related to the region were found during an extensive literature review. The taxonomic analysis of the flora of Akçakoca District was carried out by Doğru Koca and Yıldırımlı (2009), and a total of 657 taxa belonging to 103 families were identified. They also stressed that hazelnut is a major source of income for the local people, and, consequentially, the forest areas are progressively being replaced by hazelnut, which contributes to a severe degradation of the floristic composition of the area. During the floristic surveys, the same team also explored the ethnobotanical characteristics of the Akçakoca District of Düzce, and the resulting data showed that 46 taxa have 48 Turkish local names, all of which are used for various purposes in the research area. Twenty-one are used for medicinal purposes, 19 are used for food, and 4 are used for fuel (Yıldırımlı et al., 2009; Doğru Koca and Yıldırımlı, 2010). The latter report (Yeşılada et al., 1999) dealt with the folk medicines of Northwest Anatolia in general; however, only the village of Deredibi–Akçakoca in Düzce was within the scope of the current study and only four traditional remedies were cited.

In light of previous studies and data, Düzce Province with its eight districts was in need of further folk medicinal investigations. The present study was conducted in order to discover the profile of folk medicinal practices in this region. In addition to collecting and recording this precious knowledge before it is lost, the results of this study will provide invaluable information for future research in this area.

2. Materials and methods
2.1. General description of the area
Düzce Province is situated in the Western Black Sea region of Turkey (40°40′44.6″N, 31°14′24.4″E), encompassing a total area of 2,567 km², and the altitude of the central district is 140 m above sea level (Figure 1). The rainy season lasts from October to June, producing an annual rainfall of 844.9 mm, and the annual average temperature is 13.0 °C. Most of the provincial area (86%) is rough and mountainous; 14% is lowland and is known locally as the Düzce Plain. General characteristics of the Black Sea and Euro-Siberian vegetation types prevail in this region. In addition, sub-Mediterranean vegetation elements can also be found. In the northern region, forest vegetation like Fagus orientalis Lipsky, Castanea sativa Mill., Quercus cerris L., Quercus frainetto Ten., Carpinus betulus L., Tilia argentea Desf. ex. DC., Acer campestre L., and Fraxinus angustifolia Vahl., which are Black Sea elements, are dominant; in the south there are shrubs such as Arbutus unedo L., Laurus nobilis L., Phillyrea latifolia L., Pistacia terebinthus L., Erica arborea L., and Cistus creticus L., which belong to the Mediterranean vegetation (Güneş Özkan, 2009).

According to the general census of 2010, the population of Düzce was approximately 340,000, and 42.6% of the population resided in rural areas. Following two devastating earthquakes in western Turkey (17 August and 12 November 1999), the demographic structure of Düzce changed and there are many rural settlements. Approximately 45.9% of the total area is agricultural lands, 40.5% forests, 3.5% meadows and mountain ranges, and 10.1% nonagricultural lands; the main occupations of locals are farming or forestry. Nearly half of the farmland
is dedicated to cultivating hazelnuts, in addition to beets, maize, wheat, rice, and Virginia tobacco. Düzce is located between the cities of Istanbul and Ankara and other cities of Inner and Eastern Anatolia, and it has a growing economy. Additionally, as an earthquake-affected area, Düzce has qualified for new development assistance, particularly development that expands its industrial sector. Textiles, wood products, and manufacturing are the leading industries. Düzce has eight districts (Akçakoca, Çilimli, Cumayeri, Gümüşova, Gölyaka, Kaynaşlı, Yiğilca, and the central district) and 280 villages/small towns (Doğru Koca and Yıldırımli, 2009, 2010; Düzce Belediye Başkanlığı, 2017). More details can be found in the Düzce Belediye Başkanlığı 2010–2014 Dönemi Stratejik Planı (http://www.duzce.bel.tr/detay.asp?id=2354).

2.2. Selection of research localities in Düzce

Instead of visiting all of the residential sites, 106 representative towns or villages from different locations in Düzce Province were chosen. Visits for accumulating traditional knowledge of folk medicines were organized between 2008 and 2009. The distance to urban centers, accessibility of health services, population and ethnicity, altitude, diversity of flora, transportation facilities, etc. were all used as criteria for selection of fieldwork locations. In addition, locations and people were chosen according to recommendations gleaned during visits; people who were known locally and especially remote, inaccessible rural areas were prioritized. Traditional uses of plants and other materials and demographic details of all informants were recorded. The localities spotted in the present study were numbered in succession, following the names of the administrative districts they belong to, as follows.

CENTRAL [(1) Akbıyıklar; (2) Aydınpınar; (3) Bahçeköy; (4) Beçiköy; (5) Beyköy; (6) Çakırlar; (7) Çamköy; (8) Çınardüzü; (9) Çınarlı; (10) Çiftlik (Gürcüçiftlik); (11) Derdin; (12) Eskişendere; (13) Gölormanı; (14) Güven; (15) İslahiye; (16) Kirazlı; (17) Kılıçmehmetler; (18) Muradiye; (19) Musababa; (20) Ovapınar; (21) Paşakonağı; (22) Paşaoğlanı; (23) Sağlar Mahallesi; (24) Sarayyeri; (25) Soğukpinar; (26) Şiralk; (27) Üğur; (28) Uğurköy; (29) Üçyol; (30) Yeşilçimen; (31) Yükariyayalar];

AKÇAKOCA [(32) Akkaya; (33) Altıncay Mezrası; (34) Beyhanlı; (35) Çayağızı; (36) Çiçekpinar; (37) Deredibi;
During the field studies 291 plant materials were collected, and data acquired from each sample included the local name, its uses, parts used, and details of preparation and application. Most of the plants mentioned were recognized by the informants in situ during short field walks and collected for later taxonomic verification. The voucher specimens were deposited in the Herbarium of the Faculty of Pharmacy of Gazi University (GUEF) and the Herbarium of the Faculty of Pharmacy of Ankara University (AEF). Herbarium numbers were not assigned to cultivated plants. Plant identification was performed by two of the authors (Prof. G. Akaydin and Prof. A.M. Gençler Özkın) by consulting Flora of Turkey and the East Aegean Islands (Davis, 1965–1985; Davis et al., 1988; Güner et al., 2000) and by comparison with specimens in the above-mentioned herbaria.

Using the formula below, the informant consensus factor \( F_{IC} \) was calculated for remedies according to Heinrich (2000), where \( F_{IC} \) demonstrates the consistency of the data obtained from informants for a certain illness category. Informant consensus factors range between 0 and 1. A high \( F_{IC} \) (close to 1) represents consistency among informants for an illness category. A lower \( F_{IC} \) shows disagreement among informants on taxa used for a certain illness, \( n_u \) represents the number of citations used in each illness category, and \( n_l \) indicates the number of taxa used. The following equation was used: \( F_{IC} = \frac{n_u}{n_u + n_l - 1} \).

The other quantitative method used to compare results in this study was use value (UV). This method was proposed by Phillips et al. (1994) and Prance et al. (1987) and it reveals the relative significance of a taxon utilized by a certain group of informants. In other words, it defines the proportion of utilization of a plant species within an informant sample in a study area (Özüdoğru et al., 2011). It was calculated using the formula \( UV = \frac{\sum n_i}{N} \), where \( U \) indicates the number of citations for a taxon and \( N \) indicates the total number of informants.

When there are many uses reported for a plant species, the UV is high, and this suggests that the species is significantly important. Use values approach zero when there are few utilization reports relevant to the use of a particular plant. However, the UV does not determine whether a plant is used for single or multiple purposes (Musa et al., 2011; Ullah et al., 2014). Quantitative data were calculated by using plant-originated folk medicines only.

3. Results
3.1. Demography

Traditional knowledge of healing was collected from 193 persons; 119 were women (61.7%) and 74 were men (38.3%). Most of the interviewees were older than 50, and most came from families that still lead a traditional land-based lifestyle. Nearly all of the women interviewed were housewives, and the men were mainly farmers or pensioners. The average age of the interviewed persons was 56.7, and 131 informants (67.9%) were above the age of 49. Informants younger than 29 (only 3.6%) had very little knowledge of folk medicines in Düzce. A large proportion of informants (60.1%) were locally born; only 5.1% had resided in Düzce for less than 10 years. In Table 1, information on the educational status of the informants is compiled. The majority were primary school graduates.
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(46.3%), 13.8% of informants were literate, and 29.8% were unschooled and illiterate. As seen in Table 1, the ethnicity of the informants was also collected during the interviews, and 90.1% of respondents stated that they were Turkish. In addition, 15 Abkhazians (7.8%) and a few people from other ethnic groups (2.1%) contributed to this study (this region received migrants from the Caucasus towards the end of the 19th century during the last era of the Ottoman Empire).

3.2. Ethnopharmacy

According to data drawn from the questionnaires, almost all informants (97.0%) found folk medicines useful and efficient. Substantial amounts of folk medicinal plants were collected from their natural habitats around the villages (85.5%) where the informants live, and some were purchased from the market (14.5%). In cases of disease, approximately one-third of the informants (29.5%) said that they consult directly with a doctor instead of using traditional medicines, 5.8% rely on homemade local remedies, and the majority (64.7%) prefer to use both options (Table 2). The rate of people that rely solely on local folk medicines is in decline, which strongly suggests a decreasing reliance on traditional knowledge as a consequence of the increasing accessibility of modern health services.

In this study, although all the ethnobotanical and ethnomedicinal data were recorded, the primary focus was on plant species used medicinally by the inhabitants of Düzce Provence. Results show that 135 plant taxa from 55 families are used for ethnobotanical purposes (including medicine and food for humans or domestic animals, etc.) in Düzce Province. When spices and exotic plants such as Cinnamomum verum, Kalanchoe blossfeldiana, Lawsonia inermis, Piper nigrum, Salvia officinalis, and Zingiber

| Characteristics | Count | % |
|-----------------|-------|---|
| **Sex (n = 193)** |       |   |
| Female          | 119   | 61.7 |
| Male            | 74    | 38.3 |
| **Age (n = 193)** |       |   |
| ≤19 years       | 2     | 1.0 |
| Between 20 and 29 | 5   | 2.6 |
| Between 30 and 39 | 29  | 15.0 |
| Between 40 and 49 | 26  | 13.5 |
| Between 50 and 59 | 49  | 25.4 |
| Between 60 and 69 | 34  | 17.6 |
| Between 70 and 79 | 29  | 15.0 |
| ≥80 years       | 19    | 9.9 |
| **Education (n = 188)** |       |   |
| Illiterate      | 56    | 29.8 |
| Literate        | 26    | 13.8 |
| Primary school  | 87    | 46.3 |
| Middle school   | 11    | 5.9 |
| High school     | 7     | 3.7 |
| College         | 1     | 0.5 |
| **Marital status (n = 191)** |       |   |
| Married         | 161   | 84.3 |
| Unmarried       | 30    | 15.7 |
| **Employment (n = 188)** |       |   |
| Self-employed   | 9     | 4.8 |
| Worker/public servant | 1   | 0.5 |
| Housewife       | 116   | 61.7 |
| Student         | 2     | 1.1 |
| Farmer          | 40    | 21.3 |
| Retired         | 20    | 10.6 |
| **Ethnicity (n = 192)** |       |   |
| Turkish         | 173   | 90.1 |
| Abkhazian       | 15    | 7.8 |
| Others (immigrants = 3; Circassian = 1) | 4 | 2.1 |
| **Duration of residence (n = 158)** |       |   |
| Less than 10 years | 8   | 5.1 |
| More than 10 years | 55  | 34.8 |
| Since birth     | 95    | 60.1 |

Table 2. Additional data on folk medicines used by the inhabitants of Düzce.

| Questions | Number | % |
|-----------|--------|---|
| **Effectiveness of folk medicines (n = 134)** |       |   |
| Effective   | 130    | 97.0 |
| Ineffective | 4      | 3.0 |
| Where the plants are obtained (n = 131) |       |   |
| Around the village | 112 | 85.5 |
| Market      | 19     | 14.5 |
| **Treatment choices (n = 156)** |       |   |
| Consult the physician | 46 | 29.5 |
| Use traditional remedies | 9 | 5.8 |
| Both        | 101    | 64.7 |
officinale are included, this number increases to include 141 taxa, 112 genera, and 57 families. In addition, 46 of the taxa used as folk medicines are cultivated, and the rest are acquired from their natural habitat.

Local people can obtain exotic plants from local markets or herb stores. It is important that the safety record of a particular wild plant used as food be noted if it is also used for medicinal purposes.

The Latin names of the folk medicinal plants of Düzce are listed alphabetically in Supplement Table along with their local names, details of their medicinal uses, localities, number of citations, and UV calculation results. All plants in Supplement Table were verified by comparison with *Flora of Turkey and the East Aegean Islands* (Davis, 1965–1985; Davis et al., 1988; Güner et al., 2000), which includes all taxa that grow in Turkey: native, cultivated, hybrid, and naturalized. The Latin names of these identified taxa were updated according to The Plant List (http://www.thelaplantlist.org/). The plants used for animal health are presented in Table 3. The use of exotic plants for the treatment of diseases in Düzce is given in Table 4. Additionally, animal products (Table 5) and other materials (Table 6) used as folk medicine in Düzce are listed.

According to the data, in 65.1% (69 dwelling units) of the localities, there were people who had information on folk medicine. One of the most important characteristics of folk medicines is access to the plants used; they must grow in or around the nearby region (Yeşilada and Sezik, 2003). If a plant does not grow in the region any longer, its use as folk medicine is eventually forgotten.

Medicinal species recorded during fieldwork belong mostly to the family Rosaceae, followed by Compositae, Apiaceae, Lamiaceae, and Solanaceae, respectively (Figure 2). Most of these are large families with many representatives in the Anatolian flora, and some are quite common plants. As for the better known and more frequently used species, 13 of these were cited 16 times or more. The most frequently cited was *Urtica dioica* (84 citations), followed by *Plantago major* (59 citations), *Rubus ulmifolius* (44 citations), *Sambucus ebulus* (44 citations), *Prunus laurocerasus* (27 citations), *Rubus serpens* (26 citations), *Tilia tomentosa* (26 citations), *Rosa canina* (25 citations), *Juglans regia* (23 citations), *Ononis spinosa* subsp. *leiosperma* (18 citations), *Allium sativum* (18 citations), *Allium cepa* (17 citations), and *Malva neglecta* (17 citations). As was observed in this work, the more common a plant is in the area, the more common its popular use. In other words, people prefer to use plants that are readily available.

According to the Data Bank of Turkish Folk Remedies (TUHIB) and current scientific literature, 120 out of 129 plant species shown in Supplement Table have been determined in previous ethnobotanical studies carried out in different regions of Turkey (Yeşilada, 2002; Doğru Koca and Yıldırım, 2010; Güneş and Özhatay, 2011; Özüdoğru et al., 2011; Özgen et al., 2012; Akaydın et al., 2013; Gürdal and Kültür, 2013; Güler et al., 2015; Güzel et al., 2015; Han and Bulut, 2015; Mükemre et al., 2015; Özdemir and Alpnar, 2015; Polat et al., 2015; Sargın, 2015; Sargın et al., 2015a, 2015b; Günbatan et al., 2016; Uzun and Kaya, 2016; Bulut et al., 2017a, 2017b; Yeşilyurt et al., 2017; Dalar et al., 2018; Sinmez et al., 2018; Tufan et al., 2018; Sargin and Büyükçengiz, 2019). Ethnobotanical uses of 9 plants (*Lepidium coronopus*, *Hypericum androsaemum*, *Hypericum bithynicum*, *Oenanthe silaifolia*, *Pinus taeda*, *Persicaria maculosa*, *Salix excelsa*, *Sonchus arvensis* subsp. *uliginosus*, and *Typha shuttleworthii* W.D.J.Koch & Sond.) were recorded for the first time for Turkey in the present study (Supplement Table). According to TUHIB, *Cinnamomum verum* was also determined and recorded as a folk remedy for the first time in Anatolia, as it is used extensively in Düzce. Although different uses have been reported in ethnomedical records, the use of *Kalanche blossfeldiana* for the treatment of boils, wounds, acne, and paronychias was also recorded for the first time in Düzce.

Among the medicinal plants listed in Supplement Table, the uses recorded for 54 taxa and 2 genera are reported here for the first time. Some interesting implementations are also described for nonherbal folk remedies in Tables 5 and 6, such as the ingestion of snake meat for eczema, applying heated adobe brick to the painful area as a treatment for kidney diseases and urinary tract infections, and wrapping cheesecloth soaked in vinegar around the head for headache relief.

Zootherapeutical folk medicinal treatments (the use of animals, animal body parts, and some byproducts of animal metabolism as medicinal resources for the treatment of illnesses or to relieve symptoms) were among the most interesting findings of this study and are listed in Table 5. As noted, natural beehive products such as honey, beeswax, and propolis have been used for many health complaints, in particular for dermatological problems, sores, and wounds. This has been frequently observed in traditional therapeutic practices from around the world for thousands of years. Additionally, the importance of honey as an indispensable excipient for dispensing folk remedies is confirmed once again by this study with use in more than 20 herbal preparations (Supplement Table, Table3-5). The production and use of "mad honey", which is derived from the nectar of *Rhododendron* species commonly found in the region and contains a high concentration of grayanotoxin, were also observed and recorded during field work in Düzce. In the northern part of Turkey, mad honey is a popular folk medicine used in particular to treat gastrointestinal and genital/sexual problems, in addition to hypertension, arthritis, and diabetes. It is very interesting to note that although it has been known to be poisonous (producing symptoms such as chills, fainting, loss of...
Table 3. Plants used in animal disorders in Düzce folk medicine [(E) external use, (I) internal use].

| Plant name (family), voucher specimen no. | Local name, vernacular names | Part used | Use and administration | Locality | Cit. | UV |
|-----------------------------------------|-----------------------------|-----------|------------------------|----------|------|----|
| *Buxus sempervirens* L. (Buxaceae)      | Şimşir                      | Leaf      | To treat diarrhea in animals; (I) infusion is administrated orally. | 8        | 1    | 0.0051 |
| *Camellia sinensis* (L.) Kuntze* (Theaceae) | Çay, Karaçay                | Leaf      | To treat diarrhea in animals; (I) infusion is mixed with powdered coffee and 2 teaspoons full of sugar, administered orally. | 83, 84   | 6    | 0.0310 |
| *Hypericum androsaemum* L. (Hypericaceae) | Ajafet, güneş otu, kantaron | Aerial part | To treat diarrhea in animals; (E) the pinna of the animal’s ear is pierced and the herb is folded into the hole. | 89       | 5    | 0.0259 |
| *Juglans regia* L.* (Juglandaceae)      | Ceviz                       | Leaf      | Against diarrhea in animals; (I) infusion is drenched. | 97       | 23   | 0.1191 |
| *Mespilus germanica* L.* (Rosaceae)      | Beşbıyık, döngel, muşmula, töngel | Leaf, twig | To treat diarrhea in animals; (I) one glass of decoction prepared with 1–2 twigs or leaves is consumed (or drenched) each time until recovery. | 68       | 11   | 0.0569 |
| *Morus alba* L.* (Moraceae)              | Dut, tut                    | Leaf      | To treat wounds in animals; (E) wound is directly washed with the decoction. | 47       | 6    | 0.0310 |
| *Ononis spinosa* L. subsp. *leiosperma* (Boiss.) Sirj. (Leguminosae) | Andak, yandak, yandak kikeni | Root      | To treat diarrhea in animals; (I) decoction is administrated orally. | 8        | 18   | 0.0932 |
|                                           |                             |           | Against wormy wounds of animals; (E) decoction is squirted into the wound with a syringe. Worms drop out. | 24       |      |     |
| *Sambucus ebulus* L. (Adoxaceae)         | Gülüzotu, güлиз, nivirden, nüvirden, onjura, öküz kuyruğu, sultanotu, şahmelik, şahmeren, yiğidin, yivdin, yivirden | Leaf      | Against udder edema in cattle; (E) soaked in boiling water, while still warm, applied to udder. | 77, 100, 104 | 44   | 0.2279 |
|                                           |                             |           | Against foot pain and for animal diseases; (E) heated and applied to affected area. | 42       |      |     |
| *Sonchus arvensis* L. subsp. *uliginosus* (M.Bieb.) Nyman (Compositae ) | Sülüöt                     | Aerial part | To increase lactation in animals; (I) mowed and used as animal feed. | 10       | 1    | 0.0051 |
| *Viscum album* L. (Santalaceae)          | Burç, küskük otu, purç.     | Aerial part | Against foot-and-mouth disease of cattle; as feed, fresh. | 47, 68   | 8    | 0.0414 |

*: Cultivated plants; Cit.: citations; UV: use value.
consciousness, sweating, bradycardia, hypotension, and arrhythmia) since ancient times, its crucial role as a folk medicine has never faltered (Costa-Neto, 2005; Demircan et al., 2009; Y eşilada, 2015). Although local native plants are the mainstay of traditional medicine in Düzce, all other materials recorded during the fieldwork and listed in Tables 4–6 provide evidence of the creative trial-and-error basis of folk medicine.

During each interview, the informants were asked if there were any harmful effects from the reported folk medicines where no statements on harmful effects were stated. Informants provided some warnings such as “causes constipation” (Rubus serpens) or “should not be ingested by individuals who have stomach diseases” (Sambucus ebulus), and these warnings are recorded in Supplement Table.

The ailments named by local people during the fieldwork were categorized into 14 groups, and Table 7 represents the $F_{IC}$ values of these categories. Dermatological disorders had the highest $F_{IC}$ score ($F_{IC} = 0.7500$) followed by skeletomuscular ($F_{IC} = 0.7466$), gastrointestinal ($F_{IC} = 0.6666$), immunological ($F_{IC} = 0.6615$), and respiratory ($F_{IC} = 0.6292$) system disorders, respectively. The UVs of the folk medicinal plants were calculated and are listed in Supplement Table. The plants with the top three UVs are Urtica dioica ($UV = 0.4352$), Plantago major ($UV = 0.3056$), Rubus ulmifolius ($UV = 0.2279$), and Sambucus ebulus ($UV = 0.2279$). These are followed by Prunus laurocerasus, Rubus serpens, Rosa canina, and Juglans regia, respectively. These values provide insight into the homogeneity of the information, consensus in the selection and use of plants, and the relative importance of locally known species.

Table 4. Plants used in Düzce folk medicine not native to Turkey.

| Plant name (family), voucher specimen | Local name | Part used | Use and administration                                                                 | Locality |
|--------------------------------------|------------|-----------|----------------------------------------------------------------------------------------|----------|
| Cinnamomum verum J.Presl* (Lauraceae) | Tarçın     | Bark      | Against high cholesterol and fatty liver; (I) two pieces are boiled thoroughly in two glasses of water, strained, and the filtrate is consumed daily after cooling. The powdered bark is also ingested. | 31       |
| Kalanchoe blossfeldiana Poelln. (Crassulaceae) 08DZ001 | Yaraotu | Leaf | Against abscesses, wounds, acne, and to treat felon; (E) the leaf is directly applied to affected area after peeling off the membranaceous surface layer of leaf. Treatment should be repeated until complete recovery. It promotes suppuration. | 69       |
| Lawsonia inermis L.* (Lythraceae) | Kina       | Leaf | To treat eczema on hands; (E) powdered leaves are mixed with butter to form an ointment and applied to hands. Complete healing needs long-term application. | 25       |
| Piper nigrum L.* (Piperaceae) | Biber, karabiber | Fruit | Against common cold; (I) a teaspoonful of powdered fruit and sugar is added to boiling milk and kept boiling for few minutes, and is consumed before bed. | 32       |
| Salvia officinalis L.* (Lamiaceae) 09DZ083 | Adaçayı | Aerial part | Against intestinal spasms and inflammation; (I) infusion is consumed after every dinner. Against diabetes; (I) infusion is consumed after dinner. | 62       |
| Zingiber officinale Rosco* (Zingiberaceae) | Zencefil | Rhizome | Against cough; (I) powdered, mixed with bitter honey and ingested. | 87       |

(E) External use, (I) internal use.
*Cultivated plants.
Table 5. Folk medicines of animal origin used in Düzce folk medicine.

| Name or explanation | Usage and utilization                                                                                                                                                                                                 | Locality                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Bitter honey or mad honey; produced from the nectar of *Rhododendron* sp. | Against bruises, swellings; (E) applied to affected area and kept covered for half a day. Against leg pain; (E) mixed with olive oil and salt, applied to affected area. Against wounds; (E) applied to affected area with muslin. Against pains in arms; (E) applied to affected area, covered with a plastic bag, left overnight. Application should be repeated for 3–4 successive days. Against scabies; (E) applied to affected area for 3–4 days. Against fungal infections of foot; applied to affected area. Against colitis; (I) ingested mornings on an empty stomach for 3 days (started as a teaspoon and then the amount is increased gradually each day). Against cough; (I) ingested. As a panacea; (I) ingested. | 36, 37, 43, 45, 100, 102, 105 |
| Trout (*Salmo trutta*) | Against fractures, rheumatism, joint pains, and lumbar herniated disc; (E) the whole fish is cut into halves along its midline and directly applied to the affected area. Against gastrointestinal pain; (I) a whole young trout is swallowed. | 39, 31, 70, 80, 83, 104 |
| Human breast milk | Against earaches in children; (E) two drops are dropped into the ear. Against eye pain; (E) dropped into the eye.                                                                                                       | 1, 31, 71, 104, 62       |
| Honey | Against stomach ailments; (I) two coffee spoons full of honey are added to a glass of water, consumed twice daily on an empty stomach. Against diarrhea; (I) ingested. Against tickle in the throat; (I) lemon juice is squeezed into honey, mixed with warm water, and consumed. Against abdominal twinges; (I) honey sorbet is consumed. Against stomachache; (I) mixed with milk and ingested. Against diarrhea; (I) mixed with hot water and consumed. Against constipation; (I) mixed with cold water or milk and consumed. Against headache; (E) applied to the head. Against pains; (E) applied to affected area. | 2, 31, 33, 37, 45, 46, 80, 97 |
| Beeswax | Against burns; (E) mixed with butter and heated, when warm spread on a piece of a muslin, applied to the affected area and kept covered. The treatment should be repeated every day until complete recovery. Never leaves a scar. Against abscesses; (E) heated and applied to affected area. | 25                        |
| Cow milk | Against abscesses; (E) mixed with yogurt and flour, applied to affected area; promotes suppuration.                                                                                                                  | 35                        |
| Chestnut honey       | Against gashes; (E) applied to affected area. Against bronchitis, stomach ailments, and ulcer; (I) a tablespoonful of chestnut honey is added to a glass of warm milk and consumed on an empty stomach every morning. Against stomachache; (I) mixed with pounded and muslin-sieved mastic and ingested. Against cough; (I) mixed with powdered ginger and ingested. As a panacea. | 36, 37, 45                |
| Sheep skin           | Against fractures; (E) freshly flayed skin is directly applied to affected area.                                                                                                                                       | 31                        |
| Raw/untreated wool   | Against bruises and strains; (E) applied to the affected area.                                                                                                                                                        | 80                        |
| Propolis             | Against inflamed wounds; (E) melted and put inside a piece of muslin, then applied to affected area while still warm and kept covered. Against earache; (E): directly applied and wrapped on the ear or burned in conical mouth of a funnel, and the smoke is transferred into the ear by the help of the small opening at the end of the narrow stem of funnel. | 45                        |
| Fleshy underlayer of freshly flayed sheep skin | Against fractures; (E) after setting of fractured bones, applied to affected area with a towel. In the case of swelling the meat has to be replaced with new meat.                                                                 | 104                       |
In Düzce, the most frequently used plant parts are leaves (38.1%), followed by fruits (19.2%), and trunks/branches (9.6%); medicinal use of roots and other subterranean parts is more limited (12.4%) in the region (Table 8).

In accordance with the common characteristics of Turkish folk medicine, the inhabitants of Düzce also use simple prescriptions with only one or two ingredients. However, more complex formulas are occasionally used. According to the field studies, 67.8% of the folk medicines are used internally, the remaining 32.1% are used externally (Figure 3), and 22.7% of medicinal plants are applied to the affected area or directly ingested fresh and unprocessed (e.g., leaves of *Plantago lanceolata*, *Beta vulgaris*, and *Brassica oleracea*).

On the other hand, some remedies entail a more complex preparation processes (Table 9). With regard
to these methods, tisanes (infusion 30.2% or decoction 16.4%) represent the most favored way to administer medicinal plants. In general, comminuted dried plant material is used for preparing these liquid folk medicines. Some taste correctors like honey are preferably added to powdered materials used for oral administration. For decoctions and infusions in particular, it is a common practice to leave the preparations in a cool place (e.g., on the outer windowsill) overnight before use, as it is believed to enhance the effectiveness of the remedy (e.g., medicines prepared from *Olea europaea*, *Allium cepa*, *Chelidonium majus*, and *Juglans regia*). Among the data obtained by this study, there are some preparations used in ointment form for dermatological problems. The powdered or crushed plant parts (e.g., *Sambucus ebulus*, *Lawsonia inermis*, or *Plantago* sp. leaves) are mixed with readily available excipients such as pine resin, olive oil, or butter for ointment preparation. For the treatment of acne, eczema, or pain, taking a medicated bath is a common practice in the region. A warm infusion or decoction prepared from plant parts (e.g., subterranean parts of *Hypericum androsaemum* or leaves of *Juglans regia*) is used as a bath. In some cases, the sap obtained by squeezing certain parts of the plants (e.g., bulb of *Allium cepa*, fruits of *Ecballium elaterium* and

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**Table 7.** Informant consensus factor ($F_{IC}$) values for illness categories.

| Category of illness | Species | All taxa (%) | Use citation | All use citation (%) | $F_{IC}$ value |
|---------------------|---------|--------------|--------------|----------------------|----------------|
| Dermatological      | 42      | 36.21        | 165          | 19.48                | 0.7500         |
| Skeletomuscular     | 20      | 17.24        | 76           | 8.97                 | 0.7466         |
| Immunological       | 23      | 19.83        | 66           | 7.79                 | 0.6615         |
| Gastrointestinal    | 69      | 59.48        | 205          | 24.20                | 0.6666         |
| Respiratory         | 34      | 29.31        | 90           | 10.63                | 0.6292         |
| Infections          | 16      | 13.79        | 34           | 4.02                 | 0.5454         |
| Metabolic           | 29      | 25.00        | 63           | 7.44                 | 0.5483         |
| Urogenital          | 29      | 25.00        | 68           | 8.03                 | 0.5820         |
| Cardiovascular      | 12      | 10.34        | 20           | 2.36                 | 0.4210         |
| Central nervous     | 12      | 10.34        | 19           | 2.24                 | 0.3888         |
| Veterinary          | 11      | 9.48         | 16           | 1.89                 | 0.3333         |
| Eye-ear             | 8       | 6.90         | 11           | 1.30                 | 0.3000         |
| Oral hygiene        | 9       | 7.76         | 11           | 1.30                 | 0.2000         |
| Folk illness*       | 3       | 2.59         | 3            | 0.35                 | 0.0000         |

*Folk illness: diseases or symptoms described by the informants that were found to be incompatible with current medical pathology definitions.

$F_{IC}$: Informant consensus factor.
Sambucus ebulus, and root of Dioscorea communis) and the latex derived by scratching the plants (e.g., root and stem of Chelidonium majus or branches of Ficus carica) are used either directly without any processing or after some mixing procedures.

3.3. Literature survey
To the best of our knowledge, a literature review showed that there was no previous comprehensive study of folk medicines in Düzce. However, as mentioned above, there was a report from Akçakoca District (Doğru Koca and Yıldırımli, 2010). Overall, 48 local names of 46 taxa in central Akçakoca and its vicinity were identified. Out of the 44 taxa reported, 21 folk medicines, 19 food plants, and 4 fuel plants were identified. In addition, Amaranthus lividus L., Petasites hybridus (L.) Gaertn., B.Mey. & Scherb., Corylus avellana L., Nasturtium officinale R.Br., Raphanus raphanistrum L., Cucurbita moschata Duchesne., Rhododendron ponticum L., Phaseolus vulgaris L., Quercus cerris L., Q. petraeae (Matt.) Liebl., Q. pubescens Willd., Satureja hortensis L., Malva sylvestris L., Primula vulgaris Huds., Ribes alpinum L., and Lycopersicon esculentum Mill. were mentioned in the Akçakoca ethnobotanical report but not included in the current study. Comprehensive data collected by our research team on local names made new contributions to the Turkish plant names literature, as well as to the local names of the following plants compiled by Doğru Koca and Yıldırımli: Trachystemon orientalis, Oenanthe pimpinelloides, Sambucus ebulus, Beta vulgaris, Cornus mas, Juglans regia, Smilax excelsa, and Prunus laurocerasus. Some plant names recorded in Akçakoca are completely different from those recorded in the present research. For example, the names recorded for Stellaria media and Chenopodium album are circmik or yemnir and sirken or sirkence in Akçakoca (Doğru Koca and Yıldırımli, 2010) and kuşyüreği in the rest of the province.

Local names are not used for scientific accounts, as they lack homogeneity and consistency; however, they are indispensable for ethnobotanical research used to disseminate information on new beneficial plants or new uses of well-known plants. Strictly speaking, for ethnobotanical fieldwork, local names may offer a first step towards authentication of the taxa. Additionally, they provide a useful and easy way to communicate with locals in a particular area. Hence, the collection and preservation of local plant names is an important part of an ethnobotanical study along with researching valuable facts about the plants (Singh, 2008).

These two studies reveal results that confirm one another with respect to the use of some plants in folk medicine: for example, the use of Brassica oleracea and Prunus laurocerasus for rheumatism; Sambucus ebulus for constipation; Mentha longifolia for hemorrhoids; Mespilus germanica for diarrhea; Rubus sanctus, R. serpants, and R. ulmifolius for wounds; and Urtica dioica for cancer. There are also some minor differences in the indications for use of the folk medicines. For example, Doğru Koca and Yıldırımli wrote that Smilax excelsa, Morus alba, and Morus nigra are used against diabetes, and Mespilus germanica and Rubus sp. are used for stomachache. However, according to our data, S. excelsa is used for stomachache; M. alba and M. nigra for eczema, wounds, coughs as expectorants, and as cholesterol-lowering remedies; M. germanica for inflammation, rheumatism, and as a mixture for bruises; and Rubus sp. for many other health problems. Since all the districts of Düzce including Akçakoca were within

| Table 8. Plant parts used in ethnobotanical practices in Düzce. |
|------------------------|-----------------|---|
| Used part              | Number | %  |
| Underground parts      | 105    | 12.4|
| Root                   | 64     | 7.6 |
| Tuber                  | 6      | 0.7 |
| Bulb                   | 35     | 4.1 |
| Aerial parts           | 739    | 87.3|
| Leaf                   | 323    | 38.1|
| Fruit                  | 163    | 19.2|
| Complete               | 66     | 7.9 |
| Trunk, branch          | 81     | 9.6 |
| Seed                   | 43     | 5.1 |
| Flower                 | 47     | 5.6 |
| Resin                  | 14     | 1.6 |
| Cone                   | 2      | 0.2 |
| Whole plant            | 3      | 0.3 |
| Total                  | 847    | 100.0|

Figure 3. Application types of folk medicines used in Düzce.
Table 9. Folk medicine preparation types in Düzce.

| Preparation method     | Number | %    |
|------------------------|--------|------|
| Directly               | 192    | 22.7 |
| After processing       | 651    | 76.8 |
| Decoction              | 139    | 16.4 |
| Infusion               | 256    | 30.2 |
| Ointment               | 12     | 1.4  |
| Poultice               | 5      | 0.6  |
| Paste (marmalade, molasses) | 37 | 4.4  |
| Withered on the stove  | 44     | 5.2  |
| Mastication            | 28     | 3.3  |
| Juice                  | 18     | 2.1  |
| Powdered              | 17     | 2.0  |
| Cooking                | 6      | 0.7  |
| Stewed                | 2      | 0.2  |
| Other (ash, etc.)      | 87     | 10.3 |
| No information         | 4      | 0.5  |
| Total                  | 847    | 100.0|

the scope of our study, it included most of the information presented by the study conducted in Akçakoca. However, there has been some erosion of information as a result of the five-year time gap separating the two studies. This erosion highlights the need to record information before it is lost forever (Doğru Koca and Yıldırım, 2010).

3.4. Notes on nonmedicinal uses
In addition to the recorded medicinal uses, Juglans regia and Cornus mas are used for fishing, Equisetum telmateia and Prunus laurocerasus as animal feed, Juglans regia and Sambucus ebulus as dyes, and the branches of Corylus maxima in basket production. On the other hand, some plant species not listed in Supplement Table were described only for nonmedicinal uses. These include Clematis vitalba L. (Ranunculaceae), which is used as fodder, and Typha shuttleworthii (Typhaceae) for basket weaving. The use of Ophrys apifera Huds. (Orchidaceae) tubers to ferment yogurt was particularly interesting.

At this point it should be noted that 17 plant species are used exclusively for food in Düzce [Allium sp. (Amaryllidaceae), Amaranthus retroflexus L. (Amaranthaceae), Anthriscus kotschyi Fenzl ex Boiss. (Apiaceae), Arbutus unedo (Ericaceae), Chenopodium album L. (Amaranthaceae), Cirsium sp. (Compositae), Fagus orientalis Lipsky (Fagaceae), Heracleum spondylium L. (Apiaceae), Lactuca sp. (Compositae), Ophrys apifera (Orchidaceae), Rapistrum rugosum (L.) All. (Brassicaceae), Ribes uva-crispa L. (Grossulariaceae), Rumex conglomeratus Murray (Polygonaceae), Rumex crispus L., Rumex crista tus DC., Rumex scutatus L., and Sonchus asper (L.) Hill subsp. glaucescens (Jord.) Ball. (Compositae)]. Seventeen other plants (Arum italicum, Beta vulgaris, Brassica oleracea, Capsella bursa-pastoris, Malva nicaensis, Mespilus germanica, Oenanthe silaifolia, Portulaca oleracea, Prunus laurocerasus, Rumex sp., Rosa canina, Smilax excelsa, Thymus sp., Thymus longicaulis, Tilia tomentosa, Trachystemon orientalis, and Urtica dioica) have been recorded for use as food as well as medicine (Supplement Table). However, some plants with ethnobotanical uses in Düzce are also used as food plants in Turkey (Allium cepa, Allium ampeloprasum, Allium sativum, Anethum graveolens, Camellia sinensis, Capsicum annuum, Cerasus vulgaris, Citrus limon, Citrus sinensis, Coriandrum sativum, Cornus mas, Corylus maxima, Crataegus rhipidophylla, Cucurbita pepo, Cucurbita maxima, Cydonia oblonga, Diospyros kaki, Eriobotrya japonica, Ficus carica, Hordeum vulgare, Juglans regia, Malus sylvestris, Mentha x piperita, Mespilus germanica, Morus alba, Morus nigra, Olea europaea, Petro selinum crispum, Pisum sativum, Pinus taeda, Prunus avium, Prunus domestica, Panica granatam, Raphanus raphanistrum subsp. sativus, Rubus ulmifolius, Rubus serpens, Rubus idaeus, Solanum tuberosum, Sorbus domestica, Spinacia oleracea, Vitis vinifera, and Zea mays).

This overlapping of uses proves the close relationship between health and nutrition, which is quite well known in traditional societies and deserves to be one of the major components of ethnopharmaceutical research (Pieroni, 2000; Amini Rad et al., 2017).

4. Discussion
The findings of the present research revealed that in 34.9% of the localities visited there was no longer anyone who had knowledge of local folk medicines in Düzce. This observation is an important indicator of the current decline in knowledge. During conversations with locals in almost all of the locations, some of the older inhabitants of the neighborhood were honored for preparing and practicing folk medicines. However, after the deaths of these people, locals said that they began to lose interest in traditional medicines, and today they generally go to nearby healthcare institutions for healthcare. Finally, folk medicinal knowledge is not being transferred to future generations and is receiving little attention. Several fundamental factors such as rural depopulation, easy transportation to larger town centers, the proliferation of healthcare services, younger generations that are unaware, and industrialization are contributing to the disappearance of this precious knowledge. In addition, due to environmental deterioration, the aforementioned plants are not able to survive in their habitats. Consequently, plants become locally extinct, and the regional uses of these plants are forgotten.
Another important finding of this study was the deterioration of local folk medicinal knowledge. It was noted that even in the farthest villages, the information gleaned from newspapers and magazines, books making erroneous claims, and exaggerated advertisements in various media is misleading and misinforms the public regarding the use of medicinal plants. In this respect, trends may have an impact, as when interesting exotic plants and inferior or nonmedicinal native plants are introduced and promoted by popular laymen who lack professional knowledge. Meanwhile, humble local folk medicines fall out of use and the continuing knowledge of their uses is threatened (Thomas, 2011).

In some villages visited during fieldwork, residents were collecting particular plants as a result of the unsubstantiated claims of quacks in order to treat their health problems. This observation was a striking example of the negative influence of misinformation on both deeply rooted traditions and public health. In addition to providing inflated and unscientific claims, such laymen always use the vernacular names of the plants, which is often misleading, as some plant names have several synonyms. In fact, quite often, a synonym of one plant name may be the common name of another plant in a different part of the country (Tuzlacı, 2006). For example, during the field work, people in the villages were collecting *Fraxinus excelsior* instead of *Platanus orientalis*, which known as çınar in nearly every part of Turkey, apart from villages in Düzce, in the hopes of healing arthritis. Moreover, locals praised the healing effects of some nonnative plants, which were unknown to them until recently.

During the field work phase of this comprehensive study, it took a long time to separate the genuine traditional knowledge from the contaminated information. As a result of our field experiences it should be noted that field researchers in ethnopharmacology need to be extremely cautious and alert to information pollution caused by easily accessible and ever-increasing press and broadcast media sources and to examine the source of the information presented by locals.

In brief, the intrusion of quackery into folk medicinal traditions causes contamination and information pollution. Additionally, globalization has radically altered the interactions and integration of people on a global scale. Because of this, the boundaries between societies and cultures are noticeably dissolving. This study also shows that multiple factors may be involved in changes to folk medicinal knowledge and the gradual decline in the identification of native plant species. In recent decades, uncurbed commercialization of plants and plant products alleged to be healthy has confused the population. In Turkey, as in much of the world, printed and visual media commonly employ strategies of misleading and misinforming the public about medicinal plants. This malpractice leaves the population vulnerable to abuse by unethical media hype and sales techniques. The current study does not measure any effective outcomes or reveal any concrete cause-and-effect findings. However, it emphasizes the need for in-depth studies designed to unveil the prevalence of such promotional activities and their effects on folk medicinal lore and public health in Turkey (Islam and Farah, 2007).

It was observed that the number of people who know of and use the wild plants in Düzce, as well as in the rest of Anatolia, is decreasing day by day and very swiftly. Hence, ethnomedical knowledge cannot be transferred in its entirety to future generations and it begins to diminish. The above-mentioned information pollution also highlights the urgent need to record this valuable knowledge before it becomes extinct. It is quite important for Turkey, which is rich in plant diversity, culture, and history, to record the folk medicinal knowledge as soon as possible through fieldwork of rigorous scientific quality. It is also very important for these studies to be carried out by independent and specialist research groups in order to produce accurate information; ethnomedical studies of scientific quality could be the source for countless studies and the development of new medicines. Therefore, folk medicinal research, which could be the basis for further studies, is far more important than it was in the past and should be conducted more intensely and rapidly throughout the country, prioritizing the regions that have not been previously studied.

In conclusion, the wisdom, beliefs, traditions, practices, institutions, and world views conceived and fostered by local groups generate local knowledge. Occasionally this type of knowledge has been viewed as outdated, primitive, and without any potential to solve the principal problems of modern society. Others believe that the applicability and value of local knowledge must be evaluated through scientific methods for the well-being of the modern community health, nutrition, cultural heritage, and other social challenges. However, local knowledge should not be regarded as a panacea for all of the problems we have. Rather, it should complement scientific research (Vandebroek et al., 2011).

Over the past few decades, researchers have focused on developing new pharmaceuticals from herbal medicines or botanical sources following the guidance of ethnomedical records. The research and development processes for conventional drugs are very expensive and difficult because of the high risk of failure and huge investments required. The success rate of developing a new drug from an herbal preparation with a long history of folk
medicinal usage should hypothetically be higher than rates for drugs developed from chemical synthesis. Instead of blindly looking for a needle in a haystack, cultivating the deep trust of local people in their folk medicinal heritage could open new doors and opportunities for successful pharmaceutical research.

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| Plant name (family), voucher specimen no. | Local name | Part used | Use and administration | Locality | Cit. | UV |
|------------------------------------------|------------|-----------|-------------------------|----------|------|----|
| *Abies nordmanniana* (Steven) 08DZ018   | Göknar, künner, köknar | Resin | Poorly healing wounds; (E) fresh resin is applied directly on the wound for rapid recovery. Stomach disorders; (I) chewed and swallowed. Prick wounds, gunshot-gunpowder wounds; (E) applied directly to the affected area. | 102      | 15   | 0.0777 |
| *Spach subsp. equi-trojan* (Asch. & Sint. ex Boiss. ) Coode & Cullen | | | | | | |
| | | | Fissures of hand and foot; (E) resin under the bark is heated until it melts and applied directly to the affected area. Against injuries and pain; (E) resin “akndırık” is applied to the affected area. Necrotic wounds, burns, or eczema; (E) heated until it melts and then mixed with motor oil, beeswax, and butter and applied to the affected area. Depilation; (E). | | 2 | |
| | | | Male cone | Incurable diseases, i.e. cancer, tuberculosis, internal diseases, and flatulence; (I) decoction is consumed. | | |
| Plant Name | Part | Alternative Name | Disease | Preparation | Days | Value |
|------------|------|------------------|---------|-------------|------|-------|
| *Achillea sp.* | Flower inflorescence | Kasım çiçeği | Internal diseases; (I) infusion is prepared, kept in a cool place overnight, and consumed. This treatment should be repeated for 7 days. | 47 | 1 | 0.0001 |
| *Achillea nobilis* L. subsp. *neilreichii* (A.Kern.) Velen. | Capitulum | Civanperçemi | Insect stings and snake bites; (I) infusion prepared with 1 g of flower and a glass of water is consumed every day. This treatment lasts for 21 days. | 68 | 1 | 0.0051 |
| *Aesculus hippocastanum* L.* | Seed | Yabani kestane | Stomachache, toothache, colic, colds, and constipation; (I) peeled seeds are minced and swallowed after mixing with water in a cup. | 68 | 5 | 0.0259 |
| *Agrimonia eupatoria* L. | Aerial part | | Fungal infections of hand and foot; (E) dried and powdered; sprinkled between the fingers or toes. | 28 | 1 | 0.0051 |
| *Allium ampeloprasum* L.* | Leaf | Pirasa | For earache; (E) squeezed to obtain sap and one drop is dropped into the ear. (Warning: Excess is risky!) | 25, 43 | 2 | 0.0103 |
| **Allium cepa L. * (Amaryllidaceae)** | Soğan | Bulb | To treat abscess; (E) the fleshy leaves of the bulb are warmed up and applied to the abscess to promote suppuration. | 2, 35, 54, 17 | 0.0880 |
|---|---|---|---|---|---|
|  |  |  | To treat felon; (E) mixed with grated soap and liquid oil, boiled to prepare a poultice and applied to the affected area. | 32 | |
|  |  |  | Earache; (E) squeezed and the juice is dropped into the ear. | 71 | |
|  |  |  | Diabetes; (I) squeezed and the juice is kept in a cool place overnight. A half-full tea glass is consumed every day. | 80 | |
|  |  |  | To pass kidney stones; (I) bulb is ingested. |  | |
|  |  |  | Against diabetes; (I) pounded bulb is boiled with water for 3 min and every day one glass of this extract is consumed. | 62 | |
|  |  |  | To treat the dislocated bones of foot or arm; (E) seeds of black olive and the bulb are pounded together to prepare a paste, applied to the affected joint, and left covered overnight. | 58 | |
|  |  |  | Cough and sore throat; (I) grated bulb is squeezed to obtain its juice, 1–2 half-full tea glasses of juice are mixed with honey and consumed after meals for 3 days. | 83 | |
|  |  |  | As a depurative; (I) squeezed juice is consumed. |  | |
Gastric ulcer and reflux; (I) a salad is prepared by mixing onion bulb (*Allium cepa*), keltirce (*Rumex* sp.), ebegümeci (*Malva nicaeensis*), kazayağı (*Oenanthe pimpinelloides*), nane (*Mentha piperita*), and parsley (*Petroselinum crispum*) and 3 times a day every day one bowl of this salad is ingested.

| *Allium sativum* L.* | Sarımsak | Bulb |
|---------------------|----------|------|
| (Amaryllidaceae)    |          |      |
| 09DZ062             |          |      |

Alopecia; (E) bald area is made to bleed by rubbing it with a corncob (güdine) and then a garlic clove is wiped on the irritated area.

Toothache and tooth inflammation; (E) garlic cloves are directly applied to the tooth or inflammation.

Bruises; (E) garlic cloves and black olives are pounded together to prepare a paste and applied to the affected area.

As a hypotensive; (I) a clove of garlic is ingested every day to regulate the blood pressure.

Sunstroke; (E) pounded garlic cloves are mixed with yogurt and this mixture is applied to the head and wrapped with muslin.

Sunstroke; (I) pounded garlic cloves are mixed with yogurt and ingested.
Hemorrhoids; (E) garlic cloves are pricked by a toothpick and kept in olive oil and one clove is inserted into the anus every day. This treatment lasts for 40 days.

Ear ache; (E) juice obtained by squeezing a garlic clove is dropped into the ear.

Against sty and herpes infections in mouth; (E) pounded garlic cloves are applied to the affected area.

Scorpion, insect, and bee stings; (E) juice of the pounded garlic cloves is wiped on the affected area.

Bee sting; (E) pounded garlic cloves mixed with yogurt, applied to the affected area.

Dizziness; (I) a garlic clove is swallowed every morning.

To treat alopecia caused by scalp inflammation (cicatricial alopecia); (E) ash obtained from burning a piece of çınar (Fraxinus excelsior) bark is mixed with Vaseline, butter, and pounded garlic (Allium sativum) cloves, applied to the affected area of the head.
| **Anethum graveolens L.*** | Dereotu | Aerial part | As diuretic for renal disorders, leg edema; (I) infusion prepared with a mixture of dereotu (*Anethum graveolens*) herbs with cherry (*Prunus avium*) stalks, parsley (*Petroselinum crispum*) is consumed. | 57 | 1 | 0.0051 |
|-----------------------------|---------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|---|-------|
| *(Apiaceae)*                |         |             |                                                                                                                                                    |     |   |       |
| **Anthemis cotula L.**      | Acımuk  | Aerial part | Rheumatism; (E) a decoction is prepared with a mixture of acımuk (*Anthemis cotula*), ankotu (*Mentha longifolia*), and yiğidin (*Sambucus ebulus*); the patient sits in it for about 30 min while it is still warm. | 89 | 1 | 0.0051 |
| *(Compositae)*              |         |             |                                                                                                                                                    |     |   |       |
| 08DZ013                     |         |             |                                                                                                                                                    |     |   |       |
| **Artemisia sp.**           | Mideotu | Leaf        | Stomach diseases; (I) one tablespoonful of leaf is simmered in three cups of water and consumed.                                                                 | 14 | 1 | 0.0051 |
| *(Compositae)*              |         |             |                                                                                                                                                    |     |   |       |
| 09DZ149                     |         |             |                                                                                                                                                    |     |   |       |
| **Arum italicum** Mill.     | -       | Root        | Hemorrhoids; (I) it is cut into small pieces; everyday a corn kernel-sized piece is swallowed for 41 successive days without water. Use of water causes intoxication. | 39 | 1 | 0.0051 |
| *(Araceae)*                 |         |             |                                                                                                                                                    |     |   |       |
| 09DZ107                     |         |             |                                                                                                                                                    |     |   |       |
| **Bellis perennis** L.      | Beyaz papatya, papatya | Flower inflorescence | Stomachache, intestinal and internal diseases; (I) infusion prepared with “uzun yaprak” (*Plantago lanceolata*) leaves is consumed. | 89, 90 | 12 | 0.0621 |
| *(Compositae)*              |         |             |                                                                                                                                                    |     |   |       |
| 08DZ014, 09DZ100, 09DZ101, 09DZ114, 09DZ127, 09DZ045 |         |             |                                                                                                                                                    |     |   |       |


the decoction prepared with a mixture of “ince yapraklı
damarotu (*Plantago lanceolata*) leaves and young shoots of
pine (*Pinus* sp.) is consumed on an empty stomach daily for 2–3
days.

Stomach disorders; (I) infusion is consumed. 83

Against fever; (I) mixed with a tablespoonful of barley grain
and boiled in two glasses of water and then this tea is consumed
until recovery.

Sleep problems, insomnia; (I) infusion is consumed. 45

Against nausea, vomiting; (I) infusion is consumed. 40

To soothe pain and itching between toes; (E) dried and powdered
flowers are sprinkled between the toes.

Asthma; (I) infusion is consumed in the mornings for 3–4 days. 39

To ease congestion in chest; (I) infusion is consumed. 37

As a panacea; (I) infusion is consumed. 86

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**Beta vulgaris** L. * *

(*Amaranthaceae*)

| 09DZ061, 09DZ069 | Efelek, pezi, pazi, pezik | Leaf | To stimulate hair growth; (E) sap obtained by squeezing the fresh leaves is mixed with honey and applied to the head. | 41 | 3 | 0.0155

| Beta vulgaris | Leaf | To stimulate hair growth; (E) sap obtained by squeezing the fresh leaves is mixed with honey and applied to the head. | 41 | 3 | 0.0155

Maturation of abscess; (E) a fresh leaf is applied to abscess, 47, 80
covered with muslin, and kept overnight to drain the puss out.

*Brassica oleracea* L.*
(Brassicaceae)

| Plant Name       | Common Names     | Part Used     | Uses                                      | Notes
|------------------|------------------|---------------|-------------------------------------------|--------
| *Brassica oleracea* L.* | Karalahana, karamancar, mancar, şalgam | Leaf | Excessive tearing, watery eyes; (E) sap obtained by squeezing the fresh leaves is dropped into the eyes. Bone pain (especially for ribcage pain of children); (E) a fresh leaf is applied to the sore area, wrapped with a plastic bag and then a towel. To soothe pain, i.e. headache, backache, lumbago, sprains, and herniated discs; (E) a fresh leaf is wilted over a fire and applied to the affected area and covered. To halt hair loss or to stimulate hair growth; (E) leaves are boiled and strained, and then washed with the extract. Hair is kept wet 15–20 min to increase absorption, then rinsed with water. Repeat for 15 days. | 45 9 0.0466 |

*Bromus tectorum* L.
(Poaceae)

| Plant Name       | Common Name | Part Used | Uses                                      | Notes
|------------------|-------------|-----------|-------------------------------------------|--------
| *Bromus tectorum* L. | Ot | Aerial part | Stomachache of dogs; (I) dogs eat the fresh herb to stop the pain. | 45 1 0.0051 |

*Camellia sinensis* (L.) Kuntze*
(Theaceae)

| Plant Name       | Common Names     | Part Used | Uses                                      | Notes
|------------------|------------------|-----------|-------------------------------------------|--------
| *Camellia sinensis* (L.) Kuntze* | Çay, karaçay | Leaf | Against diarrhea; (I) strong tea is consumed. To treat diarrhea; (I) dry black tea is mixed with yogurt and | 102 6 0.0310 |
**Capsella bursa-pastoris (L.)**

Keditırnağı, ot

Leaf

Enteritis; (I) cooked as meal and ingested.

|  |  |  |  |
|---|---|---|---|
|  |  |  |  |

**Capsicum annuum** L. *

Acı yeşil biber

Fruit

Abscess; (E) the fruit is divided into halves and applied to the abscess overnight. It heals the abscess by the morning.

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|---|---|---|---|
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**Chelidonium majus** L.

Temreotu

Latex from root or stem

Fungal or lichen infections of hand and foot; (E) applied to the affected area until recovery.

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**Sarılık otu**

Aerial part

Jaundice; (I) 1 kg herb (fresh or dried) is boiled in 2 L of water, filtrate is kept in a cool place overnight. Every morning, one

|  |  |  |  |
|---|---|---|---|
|  |  |  |  |

Against excessive tearing, watery eyes; (E) leaves are boiled, eyes are exposed to the vapor.

To treat diarrhea; (I) strong tea is consumed on an empty stomach.

To treat open wounds; (E) applied to the sore area, stops bleeding and heals.

To remove warts and moles; (E) applied to the formation.

08DZ082

09DZ052, 09DZ132, 09DZ146,

09DZ160, 09DZ153

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glass is consumed on an empty stomach. Repeat for 7 days for complete recovery.

Sütiyen Seed Eye ailments; (E) seeds are spread on embers and the eyes are exposed to vapors.

Leaf Against lichen infections and alopecia; (E) pounded and applied to the affected area or head.

*Cichorium intybus* L. (Compositae)

Mayasilotu Aerial part Piles and bleeding fistulas; (I) infusion is consumed until recovery.

*Citrullus lanatus* (Thunb.) Matsum. & Nakai* (Cucurbitaceae)

Karpuz Fruit juice To pass kidney stones: (I) squeezed to obtain juice and consumed.

*Citrus limon* (L.) Osbeck* (Rutaceae)

Limon Fruit Against abdominal pain and common cold; (I) infusion prepared with nane (*Mentha × piperita*) leaf and black pepper fruit is consumed.

Flu; (I) infusion prepared with nane (*Mentha × piperita*) leaf is consumed.

Alopecia; (E) used for scalp massage, held for a while for

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94

76

8

1

0.0051

71

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0.0051

61

6

0.0310

62, 65

68

83
| Species                        | Part       | Use                                                                 | Incurable Diseases | Diabetes | Abdominal Pain and Diarrhea | Headache | Toothache |
|-------------------------------|------------|---------------------------------------------------------------------|--------------------|----------|-----------------------------|----------|-----------|
| *Citrus sinensis* (L.) Osbeck* | Leaf       | Constipation; (I) infusion is consumed.                              | 51                 | 1        |                             |          |           |
| (Rutaceae)                    |            |                                                                     |                    |          |                             |          |           |
| *Coriandrum sativum* L.*      | Aerial part | Stomach ailments; (I) a meal prepared with a mixture of kişniş (Coriandrum sativum) herb, ısırgan (Urtica dioica) herb, gelincik (Papaver rhoeas) leaves, and kazayağı (Oenanthe pimpinelloides) leaves is ingested. | 61                 | 1        | 0.0051                      | 60       |           |
| (Apiaceae)                    |            |                                                                     |                    |          |                             |          |           |
| 09DZ017                       |            |                                                                     |                    |          |                             |          |           |
| *Cornus mas* L.               | Fruit      | Incurable diseases, diabetes; (I) compote prepared by boiling the fruits is ingested without addition of sugar. | 89                 | 12       | 0.0621                      |          |           |
| (Cornaceae)                   | yabani kiren|                                                                     |                    |          |                             |          |           |
| 08DZ030, 09DZ098              |            |                                                                     |                    |          |                             |          |           |
|                               | Twig       | Against abdominal pain and diarrhea; (I) juice obtained by squeezing the fruits is consumed. | 76, 80             |          |                             |          |           |
|                               |            | Against abdominal pain; (I) decoction prepared with the dried fruits is consumed. |                    |          |                             |          |           |
|                               |            | To sooth pain, to ease child birth; (I) dried fruit compote is ingested. |                    |          |                             |          |           |
|                               |            | Against diarrhea; (I) either marmalade or compote is ingested.      | 45, 62             |          |                             |          |           |
|                               |            | Against headache; (I) ingested.                                     | 100                |          |                             |          |           |
|                               |            | Against toothache; (E) fresh twig is put on fire for a short period  | 102                |          |                             |          |           |
and the sap appearing at the tip is applied to the tooth.

| Species                        | Part            | Use                             | Method                                      | Reason          | p-value |
|-------------------------------|-----------------|---------------------------------|---------------------------------------------|-----------------|---------|
| *Corylus maxima* Mill.*       | Leaf            | Against rib ache and abdomen pain; (E) crushed gently between the hands and applied to the sore area. |                                | 79 3 0.0155 |
| (Betulaceae)                  | Fruit           | Against chills; (I) crushed fruits are mixed with honey and ingested. |                                | 84              |
| *Cota tinctoria* (L.) J.Gay   | Capitulum       | As a carminative; (I) infusion is consumed. |                                | 100 1 0.0051 |
| (Compositae)                  |                 |                                 |                                |                 |
| 08DZ081                       |                 |                                 |                                |                 |
| *Crataegus rhipidophylla* Gand. | Fruit          | Against diabetes; (I) ingested. |                                | 104 3 0.0155 |
| (Rosaceae)                    | Leaf            | Against diabetes and diarrhea; (I) one glass of infusion is consumed every morning on an empty stomach. |                                | 12              |
| 09DZ170                       |                 |                                 |                                |                 |
| *Cucurbita maxima* Duchesne*  | Seed            | Against intestinal worms; (I) ingested. |                                | 45, 51 2 0.0103 |
| (Cucurbitaceae)               |                 |                                 |                                |                 |
| *Cucurbita pepo* L.*          | Fruit           | Against digestive system pains, stomachache; (I) ingested. |                                | 68 3 0.0155 |
| (Cucurbitaceae)               |                 | To reduce fever in mumps; (E) rotten parts or directly grated fruits are applied. |                                | 2               |
| *Cupressus sempervirens* L.   | Cone            | Against shortness of breath; 2–3 cones boiled for 5 min and the decoction is consumed. |                                | 68 2 0.0103 |
Selvi Fruit To ease cough; (I) decoction prepared with 6 fruits and 1 L of water is consumed thrice a day (morning, noon, and evening) after meals. Should be prepared fresh before administration.

Cydonia oblonga Mill.* Ayva Leaf Against common cold, flu, and chest pain; (I) infusion prepared with leaves gathered and dried in autumn is consumed. Against cough: (I) infusion prepared with a mixture of the döngel (Mespilus germanica) and ayva (Cydonia oblonga) leaves is consumed. Leaves should be gathered during autumn when turned yellow. Against cough; (I) infusion prepared with dried leaves is consumed.

Against cough; (I) decoction prepared with ayva (Cydonia oblonga) leaf, thlamur (Tilia tomentosa) inflorescence, and elma (Malus sylvestris) peel is consumed.

Against common cold; (I) infusion prepared with ayva (Cydonia oblonga) leaf and thlamur (Tilia tomentosa) inflorescence is consumed.

Against common cold; (I) infusion prepared with ayva (Cydonia oblonga) leaf and thlamur (Tilia tomentosa) inflorescence is consumed.
oblonda) leaf, thlamur (Tilia tomentosa) inflorescence, and yeni dünya (Eriobotrya japonica) leaf is consumed.

Against kidney problems and common cold symptoms in children; (I) infusion prepared with ayva (Cydonia oblonga) and taflan (Prunus laurocerasus) leaves is consumed.

Against shortness of breath; (I) infusion prepared with its dried leaves alone or combined with define (Laurus nobilis) leaves is consumed until recovery.

Against heartburn and pyrosis; (I) infusion is consumed.

Against stenocardia and to soothe body; (I) infusion prepared with 2–3 dessert spoons of dried leaves is consumed.

Against stomachache; (I) 4–5 handfuls of dried leaves are boiled in 2 L of water until the volume is reduced to half.

Consumed before meals for one week.

| Cynodon dactylon (L.) Pers. | Ayrıko tu, sapankir an | Root | Against stomachache; (I) decoction is consumed for one week. | 61 | 2 | 0.0103 |
|-----------------------------|----------------------|------|--------------------------------------------------------------|-----|---|--------|
| Dioscorea communis (L.) Caddick | Yılanotu | Root | Against backache; (E) fresh root is cut into halves, the juice is | 47 | 1 | 0.0051 |
applied to the affected area.

**Diospyros kaki** L.f.* (Ebenaceae) Trabzon hurması Fruit Against diabetes; (I) ingested.

Against diarrhea; (I) unripe fruit is peeled off, dried by hanging, and ingested when necessary.

To stimulate lactation of nursing mothers; (I) pekmez, a thick syrup prepared by condensing the fruit juice, is ingested.

**Ecballium elaterium** (L.) A.Rich. Acıkavun Fruit Against sinusitis; (E) fruit juice is dropped into nostrils. Excessive use may be dangerous.

To ease nephralgia and to pass kidney stones; (I) infusion is prepared with 4–5 tablespoons full of herb and 3–4 glasses are consumed every day. This treatment should be continued until the pain ceases.

Against kidney problems and nephritis; (I) infusion is consumed.

Against cardiovascular and renal problems; (I) infusion is consumed.

**Erica arborea** L. Çahsüpürgesi, Flower To soothe itching in anal fissure; (I) infusion is prepared with a
(Ericaceae)  
| pirançalısı | handful of flowers and consumed. |
|------------|---------------------------------|
| 09DZ026    |                                 |

*Eriobotrya japonica* (Thunb.) Lindl.* (Rosaceae)  
| Yenidünya | Leaf | Against common cold; (I) infusion prepared with ayva (*Cydonia oblonga*) leaf, ilhamur (*Tilia tomentosa*) inflorescence, and yeni dünya (*Eriobotrya japonica*) leaf is consumed. Against cough; (I) infusion prepared with a mixture of elma (*Malus sylvestris*) peels, ilhamur (*Tilia tomentosa*) inflorescence, yeni dünya (*Eriobotrya japonica*) leaves, and döngel (*Mespilus germanica*) leaves is consumed. |
|-----------|------|-------------------------------------------------|
| 51        | 2    | 0.0103                                          |

*Euphorbia helioscopa* L.  
| Acımuk, acıot, sütlüot | Stem latex | To remove warts; (E) applied on the base of the wart two times daily. This treatment should be continued until the wart disappears. |
|-----------------------|------------|-------------------------------------------------|
| 68                    | 2          | 0.0103                                          |

*ficus carica* L.*  
| İncir | Latex | To remove warts and moles; (E) applied at the base of the wart two times daily. This treatment should be continued for 41 days. Warning: After ingestion, water consumption is prohibited for 1 h. |
|--------|-------|-------------------------------------------------|
| 68     | 8     | 0.0414                                          |
(Moraceae)  

| Species | Name | Part | Use | Method |
|---------|------|------|-----|--------|
| Fraxinus excelsior L. (Oleaceae) | Çınar | Bark | To treat alopecia and scalp inflammation; (E) ash obtained from burning a piece of çınar (Fraxinus excelsior) bark is pounded with Vaseline, butter, and garlic (Allium sativum) cloves and the ointment thus obtained is applied to the affected area on the head. | Ash obtained from burning bark, pounded with Vaseline, butter, and garlic cloves and applied to the head. |

| Species | Name | Part | Use | Method |
|---------|------|------|-----|--------|
| Hedera helix L. | Bezükotu, kersen | Stem | To induce abortion; (E) inserted into the vagina. This | Inserted into the vagina. |

formation two times a day. Treatment is continued for a few days.

To remove facial warts and vesicles; (E) applied to the formation.

To remove warts; (E) the wart is bled and latex is dripped on it. This treatment may be repeated if necessary.

Eczema; (E) a fresh branch is broken and the latex appearing at the tip is applied to the affected area.

Fruit

Abscess for suppuration; (E) halved fruit is applied to the abscess and covered.

Flatulence and dyspepsia; (I) ingested.

Constipation; (I) matured fruits are ingested.

Hedera helix L. | Bezükotu, kersen | Stem | To induce abortion; (E) inserted into the vagina. This | Inserted into the vagina. |

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| Species | Name | Part | Use | Method |
|---------|------|------|-----|--------|
| Fraxinus excelsior L. (Oleaceae) | Çınar | Bark | To treat alopecia and scalp inflammation; (E) ash obtained from burning a piece of çınar (Fraxinus excelsior) bark is pounded with Vaseline, butter, and garlic (Allium sativum) cloves and the ointment thus obtained is applied to the affected area on the head. | Ash obtained from burning bark, pounded with Vaseline, butter, and garlic cloves and applied to the head. |

| Species | Name | Part | Use | Method |
|---------|------|------|-----|--------|
| Hedera helix L. | Bezükotu, kersen | Stem | To induce abortion; (E) inserted into the vagina. This | Inserted into the vagina. |
(Araliaceae)  
**sarmaşık**, 09DZ023, 09DZ085, 09DZ133  
**sırımovuşu**  
**Twig and leaf**  
application is very dangerous and can even be fatal.

**Leaf**  
Against renal failure; (I) infusion is consumed.

Leaf  
Against stomach disorders; (I) boiled in water, filtrate is consumed on an empty stomach every night for 2–3 days.

Against burns; (E) boiled in water, the filtrate is used to clean the affected area. Egg white and unsalted butter are beaten together to prepare an ointment and applied to the affected area, then covered with a leaf. This treatment is repeated until complete healing (preferentially leaves of plants creeping on the ground are used).

**Hordeum vulgare L.** *  
*(Poaceae)*  
**Arpa**  
**Seed**  
To stimulate lactation of nursing mothers; (I) a glass of decoction is consumed daily.

**Hyoscyamus niger L.**  
*(Solanaceae)*  
**Ebelik, gözotu**  
**Seed**  
To expel worms from eyes; (E) seeds are cooked with butter in a frying pan on embers and face is exposed to the vapor.

09DZ161  
**Hypericum androsaemum L.**  
*(Hypericaceae)*  
**Ajafer, güneş otu, kantaron**  
**Aerial part**  
Against cough and asthma; (I) infusion is consumed.

Against allergies and acne; (E) infusion is used for bathing.
09DZ031, 09DZ123, 09DZ137, 09DZ035

*Hypericum bithynicum* Boiss. (Hypericaceae)

09DZ035, 09DZ124

*Sarıkantaron*  
Flower  
As a depurative and for stomach disorders; (I) 3–5 g of flowers and *andız* (*Juniperus drupacea*) roots are boiled together, filtrate is consumed 3 times a day for at least 21 days.

09DZ035, 09DZ124

*Aerial part*  
As an emmenagogue and for menstrual cramps; (I) a handful of the herb is boiled in two glasses of water, a glass of filtrate is consumed after meal.

Against wounds; (E) kept inside olive oil and applied to injuries for rapid recovery.

*Hypericum montbretii* Spach. (Hypericaceae)

08DZ009, 08DZ017, 08DZ037, 08DZ045, 08DZ057

*Acumuk, dişotu, öğleğin çiçeği,*  
Aerial part  
Against toothache; (I) infusion is consumed.

Against gastrointestinal disorders, constipation, and internal diseases; (I) infusion is consumed.

Against internal diseases; (I) infusion is consumed.

Against renal diseases and diarrhea; (I) an infusion is prepared with *acumuk* (*Hypericum montbretii*) and *kekikotu* (*Thymus* sp.) herbs, a glass is consumed daily.

*Juglans regia* L.*

*Ceviz*  
Outer green  
Against diabetes; (I) decoction is consumed.
Against wounds; (E) ointment prepared with pounded pericarp and ox butter (ghee) is applied to wounds. Even inflamed wounds may heal within 2–3 days.

Against eczema itching; (E) green husk of fresh fruit (pericarp) is rubbed on the sore area to soothe itching.

Against cough; (I) a decoction prepared with the dried woody endocarps is consumed.

Against psoriasis; (I) thoroughly ground seeds are mixed with honey and a full dessert spoon is ingested twice a day until healing.

Against burns; (E) seeds are ground with liquid oil and egg, boiled, and applied to the sore area.

Against goiter; (I) a chickpea-sized immature small fruit is swallowed every day for 40 days.

Against cardiac problems; (I) daily five seeds are ingested, it is good for heart health.

To lower high cholesterol levels; (I) 4–6 whole seeds are crushed just before addition to a glass of water and kept...
In the morning decanted water is consumed, seeds are then ingested.

Against cough; (I) seeds of three walnuts are boiled in 2 glasses of water; daily a glass of filtrate is consumed.

Seed testa
For lowering cholesterol levels; (I) infusion prepared with the peeled off membrane-like pale brown seed coat (testa) is consumed.

Stem bark
Against rheumatism; (E) peeled bark is heated and while still warm it is applied to the affected area.

Leaf
Against knee pain; (E) fresh leaf is applied to the knee and left overnight.
Knee pain; (E) boiled in water, strained, and applied to knee, covered by muslin.

Against myalgia and neurogenic pain of paralyzed person; (E) decoction of fresh leaves is used for bathing.

Against hemorrhoids; (I) infusion is cooled overnight and taken orally. This treatment should be continued for three months.

Against renal failure; (I) infusion prepared with young and
dark-green leaves is allowed to rest for 20 min and two glasses are consumed daily.

Defne Leaf

Against common cold to ease inhalation; (I) infusion prepared with dried ayva (*Cydonia oblonga*) and defne (*Laurus nobilis*) leaves is consumed.

Against common cold; (I) infusion prepared with a mixture of defne (*Laurus nobilis*) leaf and thlamur (*Tilia tomentosa*) inflorescence is consumed.

Against knee pain or other pains; (E) a towel is soaked in prepared decoction, squeezed, and wrapped on the affected area 3–4 times.

Against diabetes; (I) infusion prepared with defne (*Laurus nobilis*) leaves and işrgan (*Urtica dioica*) herb is consumed.

Against eczema and fissures of hands; (I) infusion is consumed.

Fruit

Against hemorrhoids and bleeding anal fissures; (I) dried fruits are pounded and mixed with honey to form pills. Three pills are swallowed daily, in the morning, at midday, and in the evening, for five days.

*Leaves and fruit were collected in the district of Yozgat, Turkey and identified by a local pharmacist.*

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*Family: Lauraceae

**Laurus nobilis** L.*

09DZ060, 09DZ021, 09DZ089

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| Use | Description | Reference |
|-----|-------------|-----------|
| Against common cold | infusion prepared with dried ayva (*Cydonia oblonga*) and defne (*Laurus nobilis*) leaves | 8 9 0.0466 |
| Against common cold | infusion prepared with a mixture of defne (*Laurus nobilis*) leaf and thlamur (*Tilia tomentosa*) inflorescence | 51 |
| Against knee pain or other pains | towel soaked in prepared decoction, wrapped on the affected area | 51 |
| Against diabetes | infusion prepared with defne (*Laurus nobilis*) leaves and işrgan (*Urtica dioica*) herb | 45 |
| Against eczema and fissures of hands | infusion consumed | 61 |
| Against hemorrhoids and bleeding anal fissures | dried fruits pounded and mixed with honey to form pills; three pills swallowed daily | 83 |
| Plant Name                                | Part                    | Against                                                                 | Method                                                                 |
|-------------------------------------------|-------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------|
| Lepidium coronopus (L.) Al-Shehbaz         | Aerial part             | Against rheumatism; (I) swallowed.                                      | 43                                                                     |
|                                          | Kedi tırnağı             | Against stomach ailments; (I) cooked as meal and ingested.              | 61 1 0.0051                                                             |
| Ligustrum vulgare L.                      | Leaf                    | Against herpes infections or wounds inside the mouth; (E) fresh leaf is chewed and spit out. | 39 2 0.0103                                                             |
|                                          |                         |                                                                         |                                                                        |
| Linum usitatissimum L.* Keten Seed         | Seed                    | Against tonsillitis; (E) pounded seeds are boiled in milk to prepare a poultice, applied to neck while still warm, and covered with muslin. | 105 1 0.0051                                                             |
|                                          | Elma Fruit              | Against burns; (E) rotten fruits are applied to the affected area directly or after being grated to soothe the pain by cooling down the area. | 2, 58 10 0.0518                                                            |
| Malus sylvestris (L.) Mill.* Elma Fruit    |                         | Against hoarseness, anemia and as a panacea; (I) ingested as “pekmez” prepared by boiling the fruits in water and then condensing to thick syrup consistency. | 89                                                                      |
|                                          |                         | Against hemorrhoids; (I) decoction prepared with immature fruits is consumed on an empty stomach every morning as much | 84                                                                      |
as possible.

**Fruit peel**

Against cough; (I) infusion prepared with a mixture of elma (*Malus sylvestris*) peels, ihlamur (*Tilia tomentosa*) inflorescence, yeni dünya (*Eriobotrya japonica*) leaves, and döngel (*Mespilus germanica*) leaves is consumed.

Against cough; (I) decoction prepared with ayva (*Cydonia oblonga*) leaf, ihlamur (*Tilia tomentosa*) inflorescence, and elma (*Malus sylvestris*) peel is consumed.

**Cider**

For lowering cholesterol levels and weight control; (I) apple cider is consumed.

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**Malva neglecta** Wallr. *(Malvaceae)*

08DZ062, 09DZ177

**Leaf**

Against hemorrhoids; (I, E) fresh leaf is ingested and also directly applied to anus.

Against wounds; (E) boiled in milk to prepare a poultice, while still warm applied and covered with muslin.

Against wounds; (E) applied directly and covered with muslin.

Against abscess; (E) boiled in milk to prepare a poultice and applied to promote suppuration.

As a panacea; consumed as a food.

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| Species | Common Name | Part | Use |
|---------|-------------|------|-----|
| *Malva neglecta* | Egüümeci, ebegömeci, ebekömeci | Leaf | Against hemorrhoids; (I, E) fresh leaf is ingested and also directly applied to anus. Against wounds; (E) boiled in milk to prepare a poultice, while still warm applied and covered with muslin. Against wounds; (E) applied directly and covered with muslin. Against abscess; (E) boiled in milk to prepare a poultice and applied to promote suppuration. As a panacea; consumed as a food. |

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36

45

68

69

70
Aerial part  
Against stomachache and intestinal diseases; (E) 1–2 glasses of decoction are consumed thrice a day.

Against stomach ailments and stomachache; (I) boiled in milk, strained, and ingested.

Against cancer and intestinal, renal diseases; (I) boiled in water, filtrate is covered by muslin and kept in a cool place overnight. A glass is consumed 1 h before meals.

Malva nicaeensis All.  
(Malvaceae)  
Ebegümeçi Leaf

Against fissures of feet; (I) decoction is consumed.

Against gastric ulcer and reflux; (I) a salad is prepared by using onion (*Allium cepa*), keltirce (*Rumex* sp.), ebegümeçi (*Malva nicaeensis*), kazayağı (*Oenanthe pimpinelloides*), nane (*Mentha × piperita*), and parsley (*Petroselinum crispum*), 3 bowls are ingested every day.

As a panacea; consumed as a food.

Menstrual and renal pains; (I) decoction prepared with ebegümeç (*Malva nicaeensis*) leaf and ısrğan (*Urtica dioica*)
| Herb Name | Part | Use | Preparation | Notes |
|-----------|------|-----|-------------|-------|
| *Melissa officinalis* L. (Lamiaceae) | Aerial part | Against uterine cysts and as an emmenagogue; (I) a tea glass of infusion is consumed every morning. | 51 |
| | Root | As an abortifacient; (I) after rinsing, the root is pushed inside the vagina. This practice can be fatal. | 82 |
| *Mentha longifolia* (L.) subsp. *thyphoides* (Briq.) Harley (Lamiaceae) | Aerial part | Against menstrual pains and hemorrhoids; (E) warmed up and put in the vagina or affected area. | 90 |
| | Leaf | Against rheumatism; (E) a decoction is prepared with a mixture of acımuk (*Anthemis cotula*), anikotu (*Mentha longifolia*), and yığidin (*Sambucus ebulus*); while still warm, the patient sits in this extract for 30 min. | 89 |
| | | Against common cold to ease inhalation; (I) 3–4 glasses of infusion are taken orally on an empty stomach every morning for a week. | 47 |
| *Mentha × piperita* L.* (Lamiaceae) | Leaf | Against flu; (I) infusion prepared with lemon is consumed. | 62, 65, 10 | 0.0518 |
Against abdominal pain and common cold; (I) infusion prepared with lemon and black pepper is consumed.

Against shortness of breath in common cold; (I) infusion is consumed.

Against cough; (I) infusion prepared with nane (Mentha × piperita) leaf and black pepper is consumed with the addition of honey.

Against eczema; (I) decoction is consumed.

Against gastric ulcer and reflux; (I) a salad is prepared by using onion (Allium cepa), keltircı (Rumex sp.), ebegümeci (Malva nicaeensis), kazayağı (Oenanthe pimpinelloides), nane (Mentha piperita), and parsley (Petroselinum crispum), 3 bowls are ingested every day.

Aerial parts To stimulate lactation of nursing mothers; (I) a salad is prepared by the addition of lemon and olive oil, ingested.

*Mespilus germanica* L.* (Rosaceae) Beşjährik, Beşjährik, döngel, Beşjährik, döngel, müşmula, töngel

To treat diarrhea; (I) one glass of decoction prepared with 1–2 twigs or leaves is consumed (or drenched) each time until recovery.
Against cough; (I) decoction prepared with the leaf and a matchstick-long twig is consumed.

Against cough; (I) infusion prepared with the mixture of elma (Malus sylvestris) peels, ilhamur (Tilia tomentosa) flowers/bracts, yeni dünya (Eriobotrya japonica) leaves, and döngel (Mespilus germanica) leaves is consumed.

Against cough: (I) infusion prepared with mixture of yellowed döngel (Mespilus germanica) and ayva (Cydonia oblonga) leaves is consumed.

Against hemorrhoids; (I) the thin skin underside of the outer shell is peeled off and then 200 g of it is used to prepare a decoction and consumed.

Against diabetes; (I) ingested.

Against inflammation, rheumatism, and bruises; (I) muşmula (Mespilus germanica) twigs, ısırğan (Urtica dioica) root, yaban gülü (Rosa canina) root, diken (Rubus ulmifolius) root, kekik otu (Thymus longicaulis) herb, andak (Ononis spinosa subsp. leiosperma) root are mixed evenly; decoction prepared with this
| Species                  | Part     | Use                                      | Comments                                                                 |
|--------------------------|----------|------------------------------------------|-------------------------------------------------------------------------|
| *Morus alba* L.*         | Dut, tut | Fruit                                    | To treat eczema of hands; (E) “pekmez” (condensed syrupy fruit juice) is applied directly to the affected area until it heals. |
| (Moraceae)               |          |                                          | To treat eczema of hands; (E) boiled in water, hands are submerged inside this extract twice a day for up to 15–20 days.       |
| 09DZ065                  |          |                                          | Against cough; (I) “pekmez” is ingested.                                 |
|                          |          |                                          | Against stomach ailments; (I) “pekmez” is prepared and ingested.         |
|                          |          |                                          | Against asthma; (I) infusion is consumed.                                |
| *Morus nigra* L.*        | Karadut  | Leaf                                     | For lowering cholesterol levels; (I) infusion is consumed.               |
| (Moraceae)               | Fruit    |                                          | Against stomach ailments, to treat anemia; (I) “pekmez” is prepared and ingested.                                       |
|                          |          |                                          | Against cancer; (I) “pekmez” is prepared and ingested.                   |
|                          |          |                                          | Against eczema; (E) boiled, applied to affected area.                    |
|                          |          |                                          | Against bronchitis; (I) infusion is consumed.                            |
|                          |          |                                          | Against cough and as an expectorant: (I) “pekmez” is prepared and mixed with fresh butter evenly, then ingested.            |
|                          |          |                                          | To treat anemia; (I) pekmez, jam, or fresh fruit is ingested.            |
| Plant Name                        | Part        | Usage                                                                 | References | p-value |
|----------------------------------|-------------|----------------------------------------------------------------------|------------|---------|
| *Nicotiana tabacum* L.*          | Leaf        | Against aphtha and herpes infections in mouth; (E) “pekmez” is used for gargling on an empty stomach in the mornings. | 51         |         |
| *Oenanthe pimpinelloides* L.     | Leaf        | To stop bleeding; (E) pressed directly on a cut or wound.             | 2, 35, 76  | 3       | 0.0155  |
| *Oenanthe silaifolia* M.Bieb.    | Aerial part | Against stomach ailments, bloating and as a purgative; (I) infusion is consumed. | 89         | 4       | 0.0207  |
| *Olea europaea* L.*              | Fruit       | Against strains and bruises; (E) 50–500 g of fruits are pounded with their seeds in a bronze mortar, applied to the affected area. | 11, 31     | 13      | 0.0673  |
and covered with muslin.

Against wounds; (E) pounded, mixed with butter, and applied to the affected area.

Fatty oil

Burns on the face; (E) after smearing on the face, powdered coffee beans are sprinkled on it.

Against burns: (E) mixed with egg and walnut, boiled, and applied to the affected area.

Against burns: (E) an ointment is prepared by heating a mixture of olive oil and candle wax and applied to the affected area, covered with muslin.

Against constipation; (I) half-full coffee cup of oil is consumed at 1 or 2 mealtimes every day.

Against toothache; (E) applied to aching tooth.

Against alopecia; (E) the oil is used for massaging into the scalp, head is wrapped with a towel to improve absorption, after 2 h the oil is rinsed. Application should be repeated nightly.

Seed

For dislocation of arm and foot; (E) seeds and onion are pounded together by mortar and pestle, applied to affected area,
| Plant Name                        | Part Used        | Use                                                                 | References |
|----------------------------------|------------------|---------------------------------------------------------------------|------------|
| *Ononis spinosa* L. subsp. leiosperma (Boiss.) Sirj. (Leguminosae) | Leaf             | Against diabetes; (E) a glass of freshly prepared infusion is consumed at each meal daily for up to six months. | 66         |
|                                  | Andak, yandak, yandak diken | Against jaundice and to improve breathing; (I) decoction is left overnight and consumed. | 45 18 0.0932 |
|                                  | Root             | To treat wounds on hand; (E) decoction is used to protect from infection and for rapid recovery. | 24         |
|                                  | Andak, yandak    | Against saddle wounds of horses; (E) decoction is applied to the affected area. | 83         |
|                                  | yandak diken     | Against gastric ulcers and flesh wounds; (I) decoction is consumed. | 11         |
|                                  | Root             | Against gastric ulcer and stomachache; (I) a glass of decoction prepared with a handful of crushed roots is kept in a cool place overnight and then strained into a bottle. A glass of decoction is consumed every day until recovery. | 4, 8, 19, 24, 28, 68 |
|                                  |                  | Against inflammation, rheumatism and bruises; (I) muşmula (Mespilus germanica) twigs, ısırgan (Urtica dioica) root, yaban gülü (Rosa canina) root, diken (Rubus ulmifolius) root, kekik | 83         |
*Papaver rhoeas* L. (Papaveraceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Gelincik              | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Persicaria maculosa* Gray (Polygonaceae) 

08DZ077, 09DZ181

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against stomach ailments; (I) a meal prepared with kışnış (Coriandrum sativum) herb, ısırgan (Urtica dioica) herb, gelincik (Papaver rhoeas) leaves, and kazayağı (Oenanthe pimpinelloides) leaf is ingested. | 61   |          |         |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

Aerial part

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Mayasıl otu           | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

Leaf, aerial part

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Maydanoz              | Leaf, aerial part | Against inflammation; (I) 1–2 glasses of infusion are consumed daily. | 65   | 11       | 0.0569  |
| *Papaver rhoeas*      | Leaf        | Against bronchitis and cough; (I) infusion prepared by using 4–5 katürkulağa (Plantago major) and 5–6 maydanoz (Petroselinum crispum) leaves is consumed. | 89   |          |         |
| *Mayasıl otu*         | Aerial part | Against internal diseases; (I) infusion is consumed. | 86   |          |         |
| *Persicaria maculosa* Gray (Polygonaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Persicaria maculosa* Gray (Polygonaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Persicaria maculosa* Gray (Polygonaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
| *Petroselinum crispum* (Mill.) Fuss* (Apiaceae) 

| Name                  | Part        | Uses                                                                 | Code | Quantity | P-value |
|-----------------------|-------------|----------------------------------------------------------------------|------|----------|---------|
| Papaver rhoeas        | Leaf        | Against cardiac problems and as a panacea; (I) it is used to make meals with the addition of onion. | 68   | 3        | 0.0155  |
| *Mayasıl otu*         | Aerial part | Against inflammation of hands; (I) infusion is consumed for 10 days. | 106  | 2        | 0.0103  |
Against renal diseases and foot edema; (I) infusion prepared with a mixture of cherry (*Prunus avium*) stalks, parsley (*Petroselinum crispum*), and dereotu (*Anethum graveolens*) herbs is consumed.

Against urethritis, bronchitis, cough, and diarrhea; (I) for bronchitis and cough; (I) infusion prepared by using 3–4 katırkulaği (*Plantago major*) leaves and 5–6 maydanoz (*Petroselinum crispum*) leaves is consumed every day until healing.

Against diabetes: (I) half of a bunch is ingested every morning.

Against gastric ulcer and reflux; (I) a salad is prepared by using onion (*Allium cepa*), keltirce (*Rumex sp.*), ebegümeci (*Malva nicaeensis*), kazayağı (*Oenanthe pimpinelloides*), nane (*Mentha piperita*), and parsley (*Petroselinum crispum*), 3 bowls are ingested every day.

Against vaginal inflammation; excess causes genital rashes.

Root
To pass kidney stones; (I) decoction is consumed.

*Physalis alkekengi* L. - Fruit
Against intestinal inflammation and constipation; (I) ingested.
| Family          | Species                        | Common Name | Part Used   | Uses                                                                 | Notes                  |
|-----------------|--------------------------------|-------------|-------------|----------------------------------------------------------------------|------------------------|
| Solanaceae      | *Kulakotu*                      | Seed        | Against earache, ear inflammation, and worms in the ear; (E) dried seeds are burned with beeswax on a mud brick. The smoke is transferred into the ear by the help of a tube. | 94                     |
|                 |                                |             | 09DZ139, 09DZ159 |                                                                      |                        |
| Pinaceae        | *Karaçam*                      | Resin (yavır) | Against shortness of breath in common cold; (I) resin is boiled, cooled, let stand overnight and consumed. | 104 1 0.0051           |
|                 | Pinus nigra J.F.Arnold          |             | 09DZ046     |                                                                      |                        |
|                 | *Pinus sylvestris* var. hamata  | Sarçam      | Resin (yavır) | Against shortness of breath in common cold; (I) resin is boiled, cooled, let stand overnight and consumed. | 104 1 0.0051           |
|                 | Steven                         |             | 08DZ008, 08DZ101, 08DZ141, 09DZ073, 08DZ119, 09DZ041 |                                                                      |                        |
|                 | Pinus taeda L. (Pinaceae)       | Fıstık çamı  | Seed        | As immune system booster; (I) ingested.                             | 68 1 0.0051            |
|                 |                                |             | 09DZ046     |                                                                      |                        |
| Leguminosae     | *Bezelye*                      | Seed        | Against internal diseases, cancer and tuberculosis; (I) ingested. | 89 3 0.0155            |
|                 | P. sativum L.*                 |             | 08DZ008, 08DZ101, 08DZ141, 09DZ073, 08DZ119, 09DZ041 |                                                                      |                        |
| Plantaginaceae  | *Damarotu, dar*                | Leaf        | Against shortness of breath; (I) infusion is consumed. | 76 14 0.0725           |
|                 | *yara yapraklı,*               |             | Against diabetes; (I) a glass of infusion is consumed on an empty stomach every morning. | 61                     |
|                 | *ince yapraklı*                |             |                                                                      |                        |
|                 | *damarotu,*                    |             | Against stomachache; (I) infusion is consumed. | 87, 94 0.0051           |
|                 | *sivrisülük,*                  |             |                                                                      |                        |
|                 | *sinirotu,*                    |             |                                                                      |                        |
|                 | *ince yapraklı*                |             |                                                                      |                        |
uzun Yaprak, damarotu (*Plantago lanceolata*) leaves, papatya (*Bellis perennis*) flower, and young pine shoots (*Pinus* sp.) is consumed on an empty stomach daily for 2–3 days.

Stomachache, intestinal and internal diseases; (I) infusion prepared with a mixture of papatya (*Bellis perennis*) flowers and uzun yaprak (*Plantago lanceolata*) leaves is consumed.

Against abscess; (E) fresh leaf is applied directly to abscess. 89

Against burns; (E) crushed, wrung out, and the sap is applied to the affected area. 80

Against wounds; (E) ointment prepared with the addition of butter is applied to affected area. 28, 11

Against wounds; (E) pounded and directly applied to affected area. 39
| Plantago major L. | Ahuraş, beşparmak otu, çiban otu, damarotu, katurkulağı, keçiotu, Kesik otu, siğil yaprağı, sinirli ot, sinirlikotu, sinsek yaprağı, sivilceotu,uşşek, yaraotu, yara yaprağı, yarabüzen, yarabezdüren, | Against inflamed wound, pricks, felons, and abscesses; (E) a fresh leaf is applied to the affected area, kept covered, and replaced with a new one twice a day every morning and evening to drain the pus out and for the maturation of the abscess. | 2, 8, 10, 59 | 0.3056 |
yedidamar otu
Against wounds; (E) a fresh leaf is pounded, strained through muslin, pulp is applied to affected area and covered.

37, 80

Against wounds; (E) pounded in a wooden mortar, strained through muslin, the filtrate and remaining pulp is used to dress the wound. Wound is treated in one month.

83

Against head wounds; (E) decoction is applied to affected area.

43

Against bronchitis and cough; (I) infusion prepared by using 4–5 katırkuğa (Plantago major) and 5-6 maydanoz (Petroselinum crispum) leaves is consumed.

89

Against shortness of breath; (I) infusion is consumed.

76

Against bronchitis and cough; (I) infusion prepared by using 3–4 katırkuğa (Plantago major) leaves and 5–6 maydanoz (Petroselinum crispum) leaves is consumed every day until healing.

89

Against cardiovascular diseases; (I) infusion is consumed.

39

Against nervousness; (I) 3–5 g of leaf is boiled with a glass of
water in a steel pot and consumed.

Against cancer; (I) infusion is consumed for at least 21 days.

Against gastric ulcer; (I) dried, ground, mixed with honey, and ingested.

Against stomachache and as a panacea; (I) a tea glass of infusion prepared with dried leaves is consumed every morning.

Against stomachache, gastric bleeding, and ulcer; (I) infusion is consumed unlimitedly.

Against urinary tract disorders; (I) a tea glass of infusion prepared with 15–20 leaves is consumed in mornings until recovery.

Against diabetes; (I) infusion prepared with karayemiş (Prunus laurocerasus) fruits and yedidamarotu (Plantago major) leaves is consumed.

Against hemorrhoids and kidney cancer; (I) infusion is consumed.

Against hemorrhoids; (I) decoction is consumed.
Flower

**Against hemorrhoids; (I) a meal is prepared and ingested.**

102

33

**Against piles, hemorrhoids, constipation, and enteritis; (I) 3 teaspoons full of flowers are boiled in 6 tea glasses of water until it is reduced to half of its original volume, strained through muslin, kept in a cool place overnight, and a teaspoonful is consumed every day.**

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**Platanus orientalis L.**

*Platanaceae*

Kavlanagaç

**Leaf**

Against backache; (I) decoction is consumed.

71

1

0.0051

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**Portulaca oleracea L.**

*Portulacaceae*

Semizotu, temizotu

**Aerial part**

Against constipation; (I) salad prepared by the addition of tomato is ingested.

62

1

0.0051

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**Prunus avium (L.) L.**

*Rosaceae*

Kiraz

**Fruit stalk**

Against bronchitis; (I) infusion prepared with dried stalks is consumed.

Against constipation; (I) decoction is consumed.

67

7

0.0362

As diuretic; (I) decoction is consumed.

39, 71

Against renal diseases and foot edema; (I) infusion prepared with a mixture of its stalks with maydanoz (*Petroselinum* 57

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Prunus cerasus L.*  
(Rosaceae)  
Fişne  
Fruit juice  
Against stomachache, diarrhea and anemia; (I) juice is consumed.

Prunus domestica L.*  
(Rosaceae)  
Siyah erik  
Fruit  
Against constipation; (I) boiled, as the exocarps start to open, taken off and dried. These fruits with seeds are swallowed and the infusion is consumed.

Prunus laurocerasus L.  
(Rosaceae)  
Taflan, tahlan, karayemiş  
Leaf  
Against kidney diseases and common cold in children; (I) infusion prepared with ayva (*Cydonia oblonga*) and taflan (*Prunus laurocerasus*) leaves is consumed.

08DZ043, 08DZ048, 08DZ091, 09DZ024, 09DZ032, 09DZ163, 09DZ090, 09DZ102  

- Against tonsillitis; (E) warmed up, applied on neck by muslin.  
- Pain in legs; (E) applied to the affected area and covered with muslin.  
- Against cirrhosis and diabetes; (I) infusion is consumed, the elderly should avoid this application.  
- Against mumps; (E) leaf is wilted over fire, applied to the neck, covered with muslin, and kept overnight.  
- Against stomachache, ulcer, and stomach cancer; (I) 1–2 glasses

|                      |                      |                      |                      | 89 | 3  | 0.0155 |
|----------------------|----------------------|----------------------|----------------------|----|----|--------|
| **Prunus cerasus L.*** | **Fişne**            | **Fruit juice**      | Against stomachache, diarrhea and anemia; (I) juice is consumed. |
| **Prunus domestica L.*** | **Siyah erik**       | **Fruit**            | Against constipation; (I) boiled, as the exocarps start to open, taken off and dried. These fruits with seeds are swallowed and the infusion is consumed. |
| **Prunus laurocerasus L.** | **Taflan, tahlan, karayemiş** | **Leaf**            | Against kidney diseases and common cold in children; (I) infusion prepared with ayva (*Cydonia oblonga*) and taflan (*Prunus laurocerasus*) leaves is consumed. |
|                      |                      |                      |                      | 67 | 27 | 0.1398 |
|                      |                      |                      | Against tonsillitis; (E) warmed up, applied on neck by muslin. |
|                      |                      |                      | Pain in legs; (E) applied to the affected area and covered with muslin. |
|                      |                      |                      | Against cirrhosis and diabetes; (I) infusion is consumed, the elderly should avoid this application. |
|                      |                      |                      | Against mumps; (E) leaf is wilted over fire, applied to the neck, covered with muslin, and kept overnight. |
|                      |                      |                      | Against stomachache, ulcer, and stomach cancer; (I) 1–2 glasses |
of decoction are consumed daily for a few days. After a 3-day pause, treatment is repeated.

Against stomachache, knee pain, and as a panacea; (I) infusion with leaves and twigs is consumed until recovery.

Against stomachache; (I) decoction is consumed.

For lowering blood sugar; (I) infusion is consumed.

Against aches; (E) applied to the affected area and covered with muslin.

Against hemorrhoids; (I) leaves are soaked in 1 L of water and kept in a cool place, a tea glass of filtrate is consumed every morning until finished.

Against hemorrhoids; (I) infusion is consumed.

**Fruit**

Diabetes, intestinal diseases, and for lowering cholesterol levels; (I) mature fruits are ingested.

Against diabetes; (I) ingested.

Against stomach ailments; (I) ingested.

Against stomachache; (I) ingested as compote or pekmez.

As a panacea; (I) ingested.
| Plant Name                        | Part(s)      | Use(s)                                                                 | Reference(s) |
|----------------------------------|--------------|------------------------------------------------------------------------|--------------|
| *Punica granatum* L.*            | Seed         | Against diabetes; (I) crushed and ingested. Regulates blood sugar levels. | 8            |
| (Lythraceae)                     | Fruit exocarp| Against diarrhea, (I) decoction is consumed, seeds with arils are ingested simultaneously. | 25, 2, 0.0103|
| *Raphanus raphanistrum* subsp.   | Karaturp     | Against cough; (I) sliced, mixed with honey to a syrup, kept in a cool place overnight, strained and ingested. | 83, 2, 0.0103|
| *Raphanus sativus* (L.) Domin*   | siyah turp   | Against cough; (I) a tuber is hollowed out and stuffed with honey to a syrup, left for a while and consumed. | 36           |
| (Brassicaceae)                   | Tuber        |                                                                       |              |
| *Rosa canina* L.                 | Gül tomurcuğu, itburnu, kuşburnu, köpekdíkeni, yabangülü | Fruit Against diabetes; (I) infusion is consumed. | 52, 89, 25, 0.1295 |
| (Rosaceae)                       | Fruit        |                                                                       |              |
| 08DZ064, 09DZ026, 09DZ172        |              | Against flu; (I) decoction is consumed.                                | 45, 71       |
|                                  |              | Against sore and swollen throat; (I) decoction is consumed.            | 97, 100      |
|                                  |              | Against hemorrhoids and stomachache; (I) infusion is consumed.         | 37           |
|                                  |              | Against hemorrhoids; (I) infusion is consumed, pekmez is prepared and ingested. | 89           |
|                                  |              | Against eczema; (I) pekmez is prepared and ingested every morning on an empty stomach. | 84           |
Against foot pain and itching; (I) a kind of marmalade is prepared and ingested.

Against atherosclerosis, constipation and as a panacea; (I) two glasses of infusion prepared with a tablespoonful of fruit are consumed every morning on an empty stomach.

As a panacea; (I) marmalade and pekmez of the fruits are ingested.

To strengthen immunity and regenerate, *Prunus laurocerasus* regenerates the body; (I) infusion is consumed as tea or marmalade ingested.

Against inflammation, rheumatism, and bruises; (I) muşmula (*Mespilus germanica*) twigs, ısırgan (*Urtica dioica*) root, yaban gülü (*Rosa canina*) root, diken (*Rubus ulmifolius* Schott) root, kekik otu (*Thymus longicaulis*) herb, and andak (*Ononis spinosa* subsp. *leiosperma*) root are mixed evenly; decoction prepared with this mixture is steeped and consumed.

**Flower** To pass kidney stones; (I) infusion is consumed. 8

**Root** Against dysuria; (I) infusion prepared with a mixture of 87
kuşburnu (*Rosa canina*), böğürtlen (*Rubus serpens*), and ışırgan (*Urtica dioica*) roots is consumed.

| Plant | Common Name | Part | Use | Frequency |
|-------|-------------|------|-----|-----------|
| *Rosa sp.* (Rosaceae) 08DZ035 | Yerli gül | Twigs and root | Against internal diseases; (I) a tea glass of infusion prepared with removed barks of twigs and roots is consumed every day on an empty stomach. | 90 1 0.0051 |
| *Rubia sp.* (Rubiaceae) 09DZ164 | Sarılık otu | Leaf | Against anorexia; (I) infusion is consumed. | 79 2 0.0103 |
| *Rubus idaeus* L. (Rosaceae) 08DZ048, 09DZ013, 09DZ020, 09DZ022, 09DZ059, 09DZ084, 09DZ136, | Ahududu, badem çileği, çilek, baldıran | Leaf | As a panacea; (I) a meal is prepared and ingested. | 47, 61 12 0.0621 |
| | | Fruit | Against cough and abdominal pain; (I) a jam is prepared and ingested. | 10, 58 |
| | | | Against diabetes and anemia; (I) infusion is consumed. | 62 |
| | | | Against diabetes; (I) ingested. | 76 |
| | | | As a panacea; (I) infusion is consumed for 2–3 days or put between two slices of cornbread to make a sandwich and ingested. | 61 |
| | | Root | Against diabetes; (I) infusion is consumed, a meal is prepared | 40 |
| Rubus serpens Weihe ex Lej. & Courtois (Rosaceae) 08DZ019 | Avat, bögürtlen, bögürtlen dikeni karaköstek, tiken | Leaf | Against cuts as a hemostatic; (E) fresh leaf is chewed and applied to affected area. | 2, 4, 8, 26 0.1347 |
| --- | --- | --- | --- | --- |
| Leaf and young shoots | Endmost leaves and twigs is consumed. | 2, 67, 104 |
| Young shoots | Against wounds; (E) pounded and applied to the affected area. | 61 |
| Root | Against cough; (I) decoction is consumed. Against diabetes, renal diseases, gastric ulcer; (I) infusion prepared by chopped root is consumed. WARNING: Causes constipation! Against dysuria; (I) infusion prepared with a mixture of kuşburnu (Rosa canina), bögürtlen (Rubus serpens), and ısrgan (Urtica dioica) roots is consumed. | 102 |
| Fruit | Against anemia; (I) ingested. | 87 89 |
| Scientific Name | Common Names | Uses | References |
|----------------|--------------|------|------------|
| *Rubus ulmifolius* Schott (Rosaceae) | Böğürtlen, Böğürtlen Diken, Börtlen, Börtliyen, Diken, Mahir, Mora | Against burns; (E) dried on the stove and rubbed between the hands to make a coarse powder and sprinkled over the affected area. It heals effectively, without any scar. | 81, 94, 44, 0.2279 |
| | | Against cuts; (E) wilted gently over the stove, applied to affected area, and covered. It heals and treats the wound. | 31, 76, 91 |
| | | Against wounds; (E) fresh leaf is directly or after chewing applied to affected area. | 12, 32, 34, 35, 41, 42, 45, 46, 47, 50, 51, 52, 61 |
| | | Against wounds; (E) fresh (or dried and powdered) leaf is directly applied to affected area. | 68 |
| | | Against wounds inside the mouth; (E) decoction is used for gargling. | 71 |
| | | Against wounds inside the mouth, stomach diseases, stomachache; (I) chewed; sap is swallowed, the pulp is spit out. Three applications are enough for complete healing. | 51 |
Against gastric ulcer; (I) a tea glass of infusion prepared with a handful of leaves and 2 tea glasses of water consumed every day for up to 40 days.

Leaf, twig, root
Against abdominal distension, stomachache, and flatulence; (I) infusion prepared by boiling of the mixture of leaves, twigs, and roots for 5–6 min is consumed.

Young shoot
Against stomachache; (I) sap of the pounded shoot is consumed on an empty stomach.
Against gastric ulcer; (I) fresh shoots are ingested three times daily (morning, noon, and evening) for 3 consecutive days.
Against wounds; (E) sap of the pounded shoot is dropped onto the affected area.
Against cancer; (E) decoction is consumed.

Against heartburn; (I) a glass of decoction prepared by boiling nearly 1 h is consumed twice a day for a month.

Root
Against bronchitis and diabetes; (I) washed, boiled, and kept in a cool place for a day; one glass is consumed on an empty stomach.
Against hemorrhoids; (I) infusion is consumed.

Against hemorrhoids and intestinal diseases; (I) decoction prepared with small amount of water is consumed.

Against bleeding anal fissure; (I) a tea glass of decoction is consumed twice a day (morning and evening) whenever thirst is felt.

Against inflammation, rheumatism, and bruises; (I) muşmula (Mespilus germanica) twigs, ısırgan (Urtica dioica) root, yaban gülü (Rosa canina) root, diken (Rubus ulmifolius) root, kekik otu (Thymus longicaulis) herb, and andak (Ononis spinosa subsp. leiosperma) root are mixed evenly; decoction prepared with this mixture is steeped and consumed.

Against internal diseases and diabetes; (I) decoction is consumed.

To pass kidney stones; (I) washed, boiled, kept in a cool place for three nights, a half-full glass is consumed every day for 7–15 days.

Against gynecological inflammations; (I) infusion is consumed.
| Species                  | Common Names       | Part Used | Uses                                                                 | Consumption Method                   | Quantity | P-value |
|-------------------------|--------------------|-----------|----------------------------------------------------------------------|---------------------------------------|----------|---------|
| *Rumex sp.* (Polygonaceae) | Keltirce           | Leaf      | Against gastric ulcer and reflux; (I) a salad is prepared by using onion (*Allium cepa*), keltirce (*Rumex sp.*), ebegümeci (*Malva nicaeensis*), kazayağı (*Oenanthe pimpinelloides*), nane (*Mentha × piperita*), and parsley (*Petroselinum crispum*), 3 bowls are ingested every day. | Against gastric ulcer and reflux; (I) a salad is prepared by using onion (*Allium cepa*), keltirce (*Rumex sp.*), ebegümeci (*Malva nicaeensis*), kazayağı (*Oenanthe pimpinelloides*), nane (*Mentha × piperita*), and parsley (*Petroselinum crispum*), 3 bowls are ingested every day. | 68       | 3       | 0.0155  |
| *Salix excelsa* S.G.Gmel. | Salkım söğüt      | Leaf      | Against diabetes.                                                      | Against diabetes; (I) infusion is consumed. | 83       | 1       | 0.0051  |
| *Salix sp.* (Salicaceae) | Söğüt, yabani söğüt | Leaf and twig | Against diabetes; (I) decoction is consumed.                          | Against diabetes; (I) decoction is consumed. | 69       | 4       | 0.0207  |
| *Sambucus ebulus* L.    | Gülüzotu, güzłüz   | Leaf      | Against pain, fracture, and dislocation of bones: (E) wilted         | Against pain, fracture, and dislocation of bones: (E) wilted | 44       | 4       | 0.2279  |
(Adoxaceae) nivirdin, slightly over embers, put on muslin, and applied to affected area.
08DZ003, 08DZ004, 08DZ012, nivürden, 62
08DZ049, 08DZ076, 08DZ102, onjura, Against pain; (E) boiled, applied to affected area, and covered. 67, 80,
09DZ027B, 09DZ070, 09DZ096, öküz kuyruğu, 90, 100
09DZ104, 09 DZ142 sultanotu, Against rheumatism; (E) fresh leaves wilted gently over the stove, applied to affected area, and kept covered overnight. Pain is treated by morning.
şahmelik, 2, 8, 69
şahmeren, Against pains; (E) after application of olive oil on the affected area wilted leaves are wrapped.
iğiğdin, 37
yivdin, Against rheumatism; (E) a decoction is prepared with a mixture of acmuk (*Anthemis cotula*), anıkotu (*Mentha longifolia*), and yiğidin (*Sambucus ebulus*); while still warm, the patient sits in it for 30 min.
yivirden Against knee pain and rheumatism; (E) wilted over fire and applied to affected area.

Against sunstroke; (E) mowed leaves are treated with buttermilk and then the patient is covered with this mixture.
Against the pain and itching from common nettle sting; (E) 2, 82, 39
fresh leaf or the leaf sap is applied to affected area. It soothes quickly.

Against bee stings; (E) boiled, strained, and applied to the affected area. Prevents swelling and allergic reaction.

Postnatal pain and suffering of vagina; (E) cooked over fire and applied to affected area.

Against bruises and sprains; (E) directly or after heating, applied to affected area.

Against wounds; (E) boiled with pine resin to obtain an ointment and applied to wound.

Against menstrual cramps; (E) applied to abdomen and covered.

To induce abortion; (E) leaves are heated and woman sits on it while still hot.

Against malaria; (I) boiled in buttermilk, the filtrate is consumed. Prevents fever and chills.

Leaf, flower

Against stomachache; (E) fresh inflorescences and young, endmost leaves are wilted over the stove, treated with salt and oil, and then applied to abdomen.
| Fruit | Against hemorrhoids; (I) dried fruits are swallowed on an empty stomach for up to 40 days. |
|-------|-----------------------------------------------------------------------------------------------|
|       | (II) ripe fruits are ingested.                                                                 |
|       | (III) a couple of fruits are swallowed on a full stomach 3–4 times daily. WARNING: People with stomach diseases should not ingest fruits! |
|       | To expel intestinal tapeworms and round worms; ripe fruits are ingested.                       |
|       | Against colic; (I) juice obtained by squeezing the fresh fruits is consumed.                   |
|       | Against stomachache; (I) swallowed.                                                           |
|       | Against cancer; (I) fruits are ingested.                                                       |
|       | Against eczema; (I) two fruits are ingested thrice a day.                                      |
| Root  | Against burns; (E) cooked with butter and applied to affected area.                           |

References: 2, 25, 36, 43, 45, 84, 10, 31, 68, 67, 62, 106, 81
| Plant Name                        | Part Used       | Description                                                                 | Code  | Material | p-value |
|----------------------------------|-----------------|-----------------------------------------------------------------------------|-------|----------|---------|
| *Sambucus nigra* L. (Adoxaceae)  | Flower          | Against toothache to soothe pain and inflammation: (E) cut into two pieces, juice is squeezed onto the sore tooth. | 09DZ125 | 2        | 0.0051  |
| *Sedum maximum* (L.) Suter (Crassulaceae) | Leaf | Against inflamed wounds; (E) wilted gently, after removing the outer membrane, applied to affected area. | 09DZ010, 09DZ147 | 25, 81   | 0.0103  |
| *Sempervivum sp.* (Crassulaceae) | Leaf            | Against earache; (E) sap is squeezed into the ear. | 09DZ173 | 71       | 0.0051  |
| *Smilax excelsa* L. (Smilacaceae) | Young shoot     | Against wounds; fresh shoots are applied to affected area and covered. | 08DZ095, 09DZ004, 09DZ043, 09DZ106, 09DZ150 | 50, 10  | 0.0518  |
|  |                  | Stomachache; (I) infusion prepared with the fresh leaves of young shoots is consumed. | 67    |          |         |
|  |                  | Against stomachache; (I) it is used to prepare a meal. | 83    |          |         |
|  |                  | Against stomachache; (I) it is used to prepare a meal and also ingested freshly. | 43, 45 |          |         |
|  |                  | As a stomachic; (I) membrane under the peel is chewed, in the |       |          |         |
course of time it increases in size.

| Part     | Use                                                                 | Reference |
|----------|----------------------------------------------------------------------|-----------|
| Root     | Against stomachache; (I) decoction is consumed and also ingested freshly. | 58        |
| Seed     | As stomachic; (I) chewed as a gum.                                   | 50, 58    |
| **Solanum tuberosum L.** * (Solanaceae) | Patates | Tuber | Against stomachache; (I) grated, juice obtained through squeezing is consumed. | 51 |
|          | Against fever; (E) sliced tubers are applied to with muslin.         | 47        |
|          | Against diabetes; (I) boiled and ingested.                           | 12, 51, 71|
|          | Against burns; (E) grated and applied to affected area and covered with muslin soaked in olive oil. It heals. | 51 |
| **Sorbus domestica** L.  (Rosaceae) | Ovaz, | Leaf | To pass kidney stones; (I) infusion is consumed unlimitedly for 1–4 weeks. | 12, 51, 71|
|          | Against diabetes; (I) infusion is consumed.                          | 6         |
|          | Fruit                                                                | 12, 104   |
|          | Against diarrhea; (I) dried fruits are ingested as much as possible until recovery. | 105       |
|          | Against diarrhea; (I) dried fruits are ground to obtain flour, 2 full teaspoons are ingested every day. Fresh fruit is never used for this purpose. |          |
Spinacia oleracea L.*  
(Amaranthaceae)  
Ispanak  
Leaf  
For bee stings; (E) boiled gently and applied to affected area.  

Stellaria media (L.) Vill.  
(Caryophyllaceae) 09DZ039  
Kuşyüreği  
Leaf  
Helps to stabilize the mood; it is ingested as a salad or braised to prepare a meal.  

Taraxacum microcephaloides  
Soest (Compositae ) 09DZ040  
Sarıot, sültüöt  
Flowering aerial part  
Against nephritis and stomachache; (I) decoction is consumed.  

Thymus longicaulis C.Presl  
(Lamiaceae) 08DZ059, 09DZ091, 09DZ109, 09DZ174  
Kekik  
Leaf  
To regulate and reduce pain in menstruation; (I) leaves are boiled in water for 3–4 min and consumed.

Thymus longicaulis C.Presl  
(Lamiaceae) 08DZ059, 09DZ091, 09DZ109, 09DZ174  
Aerial part  
Against cough; (I) infusion is consumed.

Against inflammatory disorders, rheumatism, and bruises; (I) muşmula (*Mespilus germanica*) twigs, ısrgan (*Urtica dioica*) root, yaban gülü (*Rosa canina*) root, diken (*Rubus ulmifolius*) root, kekik otu (*Thymus longicaulis*) herb, and andak (*Ononis spinosa* subsp. *leiosperma*) root are mixed evenly; decoction prepared with this mixture is steeped and consumed.

Against shortness of breath due to common cold; (I) infusion is consumed.
| **Thymus sp.** (Lamiaceae) | **Kekikotu** | **Aerial part** | Against stomachache; (I) infusion is consumed. | 97, 102 | 6 | 0.0310 |
|--------------------------|-------------|----------------|-----------------------------------------------|---------|---|--------|
| **08DZ079**              |             |                | Against hoarseness; (I) infusion is consumed. |         |   |        |
|                          |             |                | Against renal diseases and diarrhea; (I) an infusion is prepared with acumuk (*Hypericum montbretii*) and kekikotu (*Thymus sp.*) herbs, a glass is consumed daily. | 36      |   |        |
| **Tilia tomentosa Moench*** (Malvaceae) | **Ihlamur** | **Bark** | Against cough, flu and catarrh; (I) infusion is consumed. | 2, 8, 12, 26 | 0.1347 |
|                          |             | Inflorescence  | | 14, 35, |         |        |
|                          |             | with bracts    | | 51, 62, |         |        |
|                          |             |                | | 71, 89, |         |        |
|                          |             |                | | 97, 102, |         |        |
|                          |             |                | | 100     |         |        |
|                          |             |                | Against common cold and cough; (I) decoction prepared with ayva (*Cydonia oblonga*) leaf and elma (*Malus sylvestris*) peel is consumed. | 45, 54  |         |        |
|                          |             |                | Against common cold; (I) infusion prepared with ayva (*Cydonia oblonga*) leaf and yeni dünya (*Eriobotrya japonica*) leaf is consumed. For same purpose infusion prepared with define (*Laurus nobilis*) leaf is also used. | 51      |         |        |
| Plant Name                             | Part Used        | Uses                                                                 |
|---------------------------------------|------------------|----------------------------------------------------------------------|
| *Trachystemon orientalis* (L.) D.Don  | Root, zilbet     | Against internal diseases and to lengthen the life; (I) tea is consumed. |
|                                       |                  |                                                                      |
| *Urtica dioica* L. (Urticaceae)       | Leaf, sırgan     | Against pain in rheumatism and osteoarthritis; (E) fresh leaf is directly applied to knee and covered. Application is repeated 2–3 times. |
|                                       |                  |                                                                      |
|                                       |                  | Against pains; (E) boiled in water, affected area is exposed to the vapor. |
|                                       |                  | Against knee pain; (E) heated and applied to knee and covered. |
|                                       |                  | Against rheumatism and herniated disk; (E) fresh leaf is applied directly to the affected area and covered. |
|                                       |                  | Against intestinal cancer; (I) infusion prepared with leaves dried |
in shade is consumed.

Against face acne; (E) pounded and applied to acne.

Against eczema; (I) infusion is consumed.

Against diabetes; (I) infusion prepared with defne (*Laurus nobilis*) leaves is consumed.

As a local anesthetic before ear-piercing; (E) area to be pierced is rubbed and prickled by a fresh leaf.

As a local anesthetic before injection; (E) injection area is rubbed and prickled by a fresh leaf.

Against wounds; (E) pounded fresh leaves are applied to affected area. Stops bleeding, heals the wound.

Against female infertility; (E) boiled in water, patient sits over the vapor.

As a panacea; (I) infusion is consumed. Stimulates the blood circulation.

As a panacea; (I) a meal is prepared and ingested.
For weight control; (I) infusion is consumed.

Against renal diseases; (I) infusion is consumed.

To pass kidney stones and for hemorrhoids; (I) decoction is consumed.

Against hemorrhoids; (I) a meal is prepared and ingested.

Aerial part

Against menstrual and renal pains; (I) decoction prepared with ebegümeći (*Malva nicaeensis*) leaf and ısrınk (*Urtica dioica*) is consumed while still hot.

Against abdominal pain, stomachache, and leg pain; (I) infusion prepared with the fresh plant is consumed for 2–3 days.

Against tumors, rheumatism, and all kinds of inflammations; (I) decoction prepared with 1 kg of plant in 2 L of water is kept in a cool place overnight, strained, and filtrate is consumed on an empty stomach unlimitedly.

Against cancers; (I) infusion is consumed.

Against breast cancer; (I) infusion is consumed.
Against incurable diseases, intestinal diseases, and hemorrhoids; (I) infusion is consumed. WARNING: Excess may be harmful!

Against cancer and intestinal diseases; (I) infusion is consumed. 89, 90, 100

Against jaundice; (I) infusion is consumed. 97

Against stomachache; (I) boiled in water, kept in a cool place overnight, strained; filtrate is consumed. 67

Against stomachache, diabetes, and to relax the body; (I) sun-dried plant is boiled, kept in a cool place for two nights, strained; a glass of filtrate is consumed on an empty stomach for three consecutive mornings. 61, 69, 84

Against stomach ailments; (I) a meal prepared with kişniş (Coriandrum sativum) herb, ısrgan (Urtica dioica) herb, gelincik (Papaver rhoeas) leaves, and kazayağı (Oenanthe pimpinelloides) leaf is ingested.

Against wounds; (E) pounded to make a poultice and applied on the affected area. Treatment should be repeated 2–3 times for
complete healing.

Seed

Against hemorrhoids; (I) tea prepared with seeds is consumed. 67
Against internal diseases, diabetes, chest pain, and cough; (I) mixed with true honey, a tablespoonful is ingested on an empty stomach every morning.
Against cancer; (I) dried and pounded with Anzer honey (a special kind of bitter honey produced in the East Black Sea Region of Turkey), a teaspoonful is ingested every morning for 40 days.
Against alopecia; (I) infusion is consumed for up to 6 months. 47
Against cancer; (I) mixed with honey; a full dessert spoon is ingested on an empty stomach every morning.
Against all kinds of cancers; (I) tea prepared with dried seeds is consumed. Overuse may be harmful!
As a panacea; (I) dried, powdered, and mixed with bitter honey; a teaspoonful is ingested every morning.
Against asthma; (I) dried and pounded with bitter honey and a teaspoonful is ingested every morning.
Root Against dysuria; (I) infusion prepared with a mixture of kuşburnu (*Rosa canina*), böğürtlen (*Rubus serpens*), and ısrgan (*Urtica dioica*) roots is consumed. Against alopecia; (I) infusion is used to wash the hair, left on for a while for better absorption before rinsing. Against renal problems, incurable diseases; (I) a glass of decoction is consumed on an empty stomach every morning. Against inflammation, rheumatism, and bruises; (I) muşmula (*Mespilus germanica*) twigs, ısrgan (*Urtica dioica*) root, yaban guilder (*Rosa canina*) root, diken (*Rubus ulmifolius*) root, kekik otu (*Thymus longicaulis*) herb, and andak (*Ononis spinosa* subsp. *leiosperma*) root are mixed evenly; decoction prepared with this mixture is steeped and consumed. Against rheumatism; (I) infusion is consumed. Against hemorrhoids; (I) decoction is consumed for a week. Whole plant Against cancer, stenocardia, and diabetes; (I) decoction prepared with chopped whole plant is kept in a cool place overnight. A tea glass is consumed every morning.
| Plant Name                  | Common Name          | Part Used | Uses                                                                 | References |
|----------------------------|----------------------|-----------|----------------------------------------------------------------------|------------|
| *Viola sp.*                | Menevşe              | Leaf      | Against wounds; (E) wilted in a pan with some butter and applied to affected area. | 86, 1      |
| (Violaceae)                |                      |           |                                                                      |            |
| 09DZ180                    |                      |           |                                                                      |            |
| *Viscum album* L.          | Burç, kükük otu, purç | Leaf      | Against heart diseases; (I) infusion prepared with one leaf in a glass of water is consumed every day for up to 20 days. The type of host tree makes no difference. | 51, 8      |
| (Santalaceae)              |                      |           |                                                                      |            |
| 09DZ057, 09DZ058, 08DZ117  |                      |           |                                                                      |            |
|                            |                      | Leaf and  | Against diabetes; (I) leaves with stems (not fruits) are macerated in warm water, strained, and consumed. | 45         |
|                            |                      | young twig|                                                                      |            |
|                            |                      | Aerial part| Against diabetes; (I) 3 tea glasses of infusion a day (morning, noon, and evening) are consumed. The host tree should be pear, apple, or cherry. | 19, 47, 68, 102 |
|                            |                      | Fruit     | To pass kidney stones and for kidney inflammation; (I) decoction is consumed whenever thirst is felt. | 39         |
| *Vitis vinifera* L.*       | Çakıl üzüm, üzüm     | Fruit     | Against sunstroke; (E) fruits are smashed and directly applied to the body and wrapped. | 97, 7      |
| (Vitaceae)                 |                      |           |                                                                      |            |
| 08DZ069                    |                      |           | Against lichen infections; (E) affected area is made to bleed by rubbing it with a corncob, then pekmez mixed with salt is applied to the irritated area. | 45         |
| Plant/Part                  | Description                  | Uses                                                                                             | Notes       |
|---------------------------|-------------------------------|--------------------------------------------------------------------------------------------------|-------------|
| Kara üzüm, kokulu üzüm     | Fruit (black variety)        | Against anemia; (I) fruits are directly consumed or syrup, marmalade, or pekmez (a thick syrup obtained by condensation of grape juice on open fire) prepared from the fruits is consumed. | 35, 45, 51, 83 |
| Üzüm                      |Twig                           | Against dandruff and as a hair tonic; (E) old vine branch is cut, red sap is collected in a pot and used to wash the hair. | 84          |
| *Zea mays L.* (Poaceae)    | Mısır Seed (starch)           | Against diarrhea; (I) a tablespoonful of corn flour is fried in a pan with a half tablespoonful of butter and ingested. Against burns; (E) equal amounts of corn flour, salt, and yogurt are mixed, applied to the affected area, and covered. | 62, 83      |

*: Cultivated plants; Cit.: citations; UV: use value.