Marmara Pharmaceutical Journal 19: 268-282, 2015
DOI: 10.12991/mpj.201519392830

ORGINAL RESEARCH

An Ethnobotanical Study of Medicinal Plants in Bayramiç (Çanakkale-Turkey)

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ABSTRACT

A comprehensive ethnobotanical study has been conducted in Bayramic in the western part of Turkey. This paper includes folk medicinal plants and ethnopharmacological information obtained during this ethnobotanical study. The aim of this study is to collect and identify the plants used by the local people for therapeutic purposes and to reveal information about traditional herbal medicine. The materials of this study are the plant specimens collected during the fieldwork. The information was obtained through open and semi-structured interviews from the local people. In addition, cultural importance index (CI), medicinal importance index (MI) and use report (UR) were calculated. Eighty-nine folk medicinal plants belonging to 39 families were identified in this study. Among them, 71 species are wild, and 18 species are cultivated plants. The most common families are Lamiaceae (25%), Rosaceae (9.1%) and Asteraceae (9.1%). Consequently, 192 medicinal uses (remedies) belonging to 89 taxa were recorded. According to the use reports (UR), the most important medicinal plants were *Allium sativum* (92 UR), *Lavandula stoechas* subsp. *stoechas* (89 UR), *Vitex agnus-castus* (89 UR), *Pinus brutia* (87 UR), *Olea europaea* subsp. *europaea* (83 UR), *Sideritis trojana* (83 UR) and *Cydonia oblonga* (80 UR). Infusion (53.4%) is the most common preparation method in the research area. Traditional folk remedies are still important and used in therapy, especially in the villages in mountainous areas.

Keywords: Ethnobotany; Folk medicinal plants; Bayramic; Çanakkale; Turkey.

Introduction

It is a well-known fact that plants have played a significant role in the daily life of human beings throughout the centuries because they have provided many benefits, such as food and drug. In other words, plants are positioned at the top of the natural resources for treating various illnesses. Treatment with traditional folk medicine still retains its old or traditional importance, particularly among those who live with the lack of modern healthcare in today's world. Approximately 80% of the general population in the world use plants to treat several illnesses (1).

It is a well-established fact that ethnobotanical knowledge is very important. For this reason, many ethnobotanical studies have been carried out by us (2-18) and by other researchers in Turkey.

The province of Çanakkale, which is located in western Anatolia, is famous because of the ancient city of Troy and Mount Ida (Kaz Dağı) mentioned in the stories of mythology

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(Fig. 1). Mount Ida is also one of the most important botanical areas in Turkey (19). Our research area Bayramic covers the northern part of this mountain.

Fig1. Mount IDA

The vegetation of Bayramic mainly consists of Mediterranean elements (macchie). The richest vegetation is in the mountainous areas of the southern part of the Bayramic district. The forest consisting of ***Pinus nigra*** J.F. Arnold subsp. *nigra* var. *caramanica* (Loudon) Rehder, *Abies nordmanniana* (Stev.) Spach subsp. *equi-trojani* (Aschers. et Sint. ex Boiss.) Coode et Cullen and *Fagus orientalis* Lipskyis mostly located on the higher parts of Mount Ida as pure or mixed forest (Fig. 2). *Pinus brutia* Ten. is found particularly in the lower altitudes as a pure forest or mixed with other trees. Shrubs and semi-shrubs were observed particularly on the lower slopes of this mountain. *Cistus creticus* L., *Juniperus oxycedrus* L. subsp. *oxycedrus*, *Quercus coccifera* L. and *Spartium junceum* L. are the most common shrubby plants in the vegetation. There are many herbaceous plants belonging mainly to Fabaceae, Asteraceae, Poaceae and Lamiaceae in the vegetation of the research area.

Fig. 2. Forest of Mount Ida including Pinus nigra subsp. nigra var. caramanica and Abies nordmanniana subsp. equi trojani

The aim of this study is to present detailed information about the traditional herbal medicine recorded in Bayramic, where there is no such comprehensive investigation except for a few ethnobotanical records (20) from this area. Brief results of our study including a list of folk medicinal plants of Bayramic, was published previously (5).

2. Materials and methods

2.1. Study area

Bayramic is located (38°48´31´´N - 26°36´35´´E) in the western part of Turkey at an altitude of 76 m above sea level. It covers an area of 1275 km^2 and its population is 30,707. More than 13,000 people live in the city centre, while the remainder live in the villages (http://www.yerelnet.org.tr/ the last accessed date 01.03.2013). The population prodominantly consists of immigrants from the Balkans and Turkmens. Bayramic is surrounded by the central province of Çanakkale in the north, Ayvacık and Edremit (Balıkesir) in the south, Çan and Yenice in the east and Ezine in the west. It consist of 74 villages (Fig. 3).

Fig. 3. Geographical location of the study area

There are alsoTurkmen living in the area and they mostly migrate to the mountains, especially in summer, and practice stockbreeding. The Bayramic district consists of plain areas around the Menderes (Scamander) stream. Its main sources are found in Mount Ida. In the south and east of the district, Kuruahlat-Dede Mountain (765 m) and Çalıdağ (540 m) and Mount Ida (1767 m) are the most prominent elevations. The north and west of the district is lower than its south and east. The most significant elevation in the north is Kayalı Mountain (897 m). The most important river of the region is Menderes Stream from Mount Ida (21, 22). On the other hand; Mount Ida is a border between Bayramic (Çanakkale) and Edremit (Balıkesir).

There is no comprehensive floristic research on Bayramic. However, approximately 800 taxa were recorded on Mount

Ida. The flora consists of Mediterranean elements (26 %), Euro-Siberian elements (17.6 %) and Irano-Turanian (1.3%) elements.. Among them, 25 taxa are endemic to this mountain. These are as follows: *Abies nordmanniana* (Stev.) Spach subsp. *equi-trojani* (Aschers. et Sint. ex Boiss.) Coode et Cullen, *Achillea fraasii* Schultz Bip. var. *trojana* Aschers. et Heimerl, *Allium kurtzianum* Aschers. et Sint. ex Kollmann, *Armeria trojana* Bokhari et Quézel, *Asperula sintenisii* Aschers. et Bornm., *Astragalus idea* Sirj., *Centaurea odyssey* Wagenitz, *Cirsium steirolepis* Petr., *Erysimum idea* Polatschek, *Ferulago idea* Özhatay et Akalın, *Festuca ustulata* (Hack. ex St.Yves) Markgr.-Dann., *Galium trojanum* Ehrend., *Hesperis theoprastii* Borbas subsp. *sintenisii* Dvorak, *Hieracium idea* (Zahn) Sell et West, *H. phaeochristum* Zahn, *H. scamandris* Zahn, *Hypericum kazdaghensis* Gemici et Leblebici, *Iberis saxatilis* L., *Jasione idaea* Stoj., Mattiola trojana T. Dirmenci, F. Satıl et G. Tümen, *Peucedanum arenarium* Waldst. et Kit. subsp. *urbanii* (Freyn et Sint. ex Wolff) Chamberlain, *Sideritis trojana* Bornm., *Silene bolanthoides* Quezel, Contandriopoulos et Pamukçuoğlu, *Thymus pulvinatus* Celak. and *Verbascum scamandrii* Murb.(19) (Fig. 4).

Fig. 4. Verbascum scamandrii

The climate in the area is typically Mediterranean with an annual mean temperature of 14.3 °C and a mean rainfall of 472 mm.
The main crops of Bayramic are apple, peach, grape, wheat and sesame.
During our ethnobotanical research, a preliminary floristic study was also made. Other local plants were also collected. Records from the literature (20, 23, 24, 25, 26) were added to our floristic list. As a result, a total of 280 species belonging to 74 families have been found in the research area. The most important families are Asteraceae (11 %), Lamiaceae (10%), Rosaceae (6%), Fabaceae (5.7%) and Apiaceae (5%) in the floristic list.

2.2. Data collection

Ethnobotanical data were collected through open and semi-structured interviews (27, 28, 29) with local people.
Bayramic area was visited several times between 2004 and 2007. The interviews were made as general conservations with a strict questionnaire. Plant vouchers were collected, mostly in collaboration with the informants.
A total of 135 people were interviewed. Of these, 72 of the informants were women (% 53) and the remaining 63 (% 47) were men. The age of informants varying from 30 to 90 and the mean age is 65 (Fig. 5).

Fig. 5. Ethnobotanical interwiev

The informants included farmers, housewives, shepherds, mukhtar (headmen of villages), labourers (forest, industry etc.) and cafe owners. Interviews were made at the various places (coffee houses, gardens, houses, fields, etc.). The local healers (4) and experienced adults and patients were the sources of information on the various data (local names, part(s) of the plants used, the ailments treated, the therapeutic effect, the methods of preparation and the methods of administration). Furthermore, some adverse effects of folk medicine were also recorded, if declared.
The collected plants were identified by the authors according to "Flora of Turkey and East Aegean Islands" (23, 24, 25). Voucher specimens are kept in the Herbarium of Faculty of Pharmacy, University of Marmara (MARE).

2.3. Calculations

The Cultural Importance Index (CI) (30) relates to the species most commonly used by the informants. It was calculated using the following formula: CI=UR/N; UR (Use Report)= the use recorded for every species; N= The total number of informants participating in the research. For that reason, each taxon referred by a respondent within a medical use-category (detailed in Table 1) has been counted as a use-report (UR). We propose the popular use in therapy (POPUT), which was calculated using the following formula: POPUT=NURIT/TUR; NURIT= the number of use reports for each illness or therapeutic effect; TUR=total number of use reports. The Medicinal importance index (MI) (31) has also been calculated. This is a relative importance index obtained by dividing the total of the UR cited for a specific use-category by the number of taxa that have this use.

3. Results and discussion

Demographic characteristics of informants

The demographic characteristics of the informants were recorded during the face-to-face interviews. Of the 135 participants taking part in the questionnaire, 10 were between the ages of 30 and 40, 15 were between the ages of 41 and 54, 45 were between the ages of 55 and 59, and 65 were over the age of 60. All of the informants were native to Bayramic. A total of 125 were living in the villages, and 10 in the centre of Bayramic. Of the informants, 72 were female, and 63 were male. The majority of informants have not completed secondary school.

As the results were evaluated according to the region's ethnic populations and groups with different backgrounds, no significant difference could have been encountered.

Medicinal plants and related knowledge

The plants used for medicinal purposes in Bayramic are presented in Table 1 and Table 2 alphabetically arranged according to their botanical names with the relevant information. Taxonomical changes according to the Plant List (32) are shown in parentheses in Table 1 together with their popular scientific names. During the study, 242 specimens were collected in the research area. According to the results of identification of the specimens, 89 medicinal plant species belonging to 39 families were found in the research area. Among them, 71 species are wild and 18 species are cultivated plants. The most common medicinal plant families are Lamiaceae (25%), Rosaceae (9.1%) and Asteraceae (9.1%).

According to the total number (2166 UR) of use reports, the plant parts used for treating different ailments are aerial parts (23.8%), leaves (15.3%), fruits (11.3%), subterranean parts (9.9%) and other parts (39.7%). The main preparation methods of the remedies are infusion (53.4%), decoction (10.7%) and other ways (35.9 %). During the study totally 194 medicinal uses was recorded. Remedies were mainly taken internally (71%) (Table 1, 2, 3).

Plants are used mostly in the mountain villages far from the downtown area of Bayramic.

Sometimes the local people also used other ingredients, such as olive oil, honey and beeswax to prepare the remedies.

According to statements by the informants, *Centaurea solstitialis* subsp. *solstitialis* is no longer used because malaria has not been seen in the research area.

In some small villages of the region, an essential oil is extracted from plants thorough traditional methods. A special volatile oil used in therapy is obtained by a traditional method (the imbik method) from *Origanum vulgare* subsp. *hirtum* in Evciler village (Fig. 6).

Fig. 6. A special volatile oil used in therapy is obtained by a traditional method (the imbik method) from Origanum vulgare subsp. hirtum in Evciler village.

Sideritis trojana is an endemic species. It is cultivated in gardens in Bayramic for use in therapy. In addition, *Salvia fruticosa* is frequently grown in gardens.

Among the veterinary folk medicinal plants (Table 2), *Phillyrea latifolia* is used only for animal health. This plant is used for a similar purpose in Ezine (Çanakkale) and Gönen (Balıkesir) in Turkey (11, 14).

Some of the medicinal plants are also used in multi-herbal recipes containing two or more species. These are presented in Table 3. Among them, *Alkanna tinctoria* subsp. *tinctoria* is used only in a multiherbal recipe.

The same vernacular name is used by the native people for

some different plant species. For instance, *Achillea nobilis* subsp. *neilreichii, Achillea nobilis* subsp. *sipylea, Asplenium adiantum-nigrum, Daucus carota, Teucrium chamaedrys* subsp. *lydium, Teucrium polium* (Mayasıl otu), *Cistus creticus, C. salviifolius* (Pamuklar), *Malva nicaeensis, Malva sylvestris* (Develik, Ebe gümeci), *Anthemis tinctoria* var. *tinctoria, Matricaria chamomilla* var. *chamomilla, Matricaria chamomilla* var. *recutita* (Papatya), *Matricaria chamomilla* var. *chamomilla, Matricaria chamomilla* var. *recutita* (Papaçya), *Mentha longifolia* subsp. *thyphoides* var. *thyphoides*, *Mentha spicata* subsp. *spicata* (Nane), *Micromeria juliana, Origanum onites, Origanum vulgare subsp. hirtum, Thymbra spicata* var. *spicata, Thymus zygioides* . var.*lycaonicus* (Kekik), *Rubus canescens* var. *canescens, Rubus canescens* var. *glabratus, Rubus sanctus* (Böğürtlen), *Salvia fruticosa, Salvia tomentosa* (Ada çayı, Moşapla), *Thymus zygioides* var. *lycaonicus, Thymus longicaulis* subsp. *chaubardii* var. *chaubardii* (Taş kekiği), *Thymbra spicata* var. *spicata, Thymus zygioides* var. *lycaonicus* (Kır çayı), *Tilia argentea, T.rubra* subsp. *caucasica* (Ihlamur) and *Urtica dioica, U. urens* (Isırgan).

Some of the vernacular names of the herbal medicinal plants have been recorded in this study for the first time (8, 33, 34). They are as follows: Akıllı eğrelti (*Pteridium aquilinum*), Arı otu (*Melissa officinalis*), Arnamus otu (*Daucus carota*), Biberyane **(***Rosmarinus officinalis*), Dedeburnu (*Lavandula stoechas* subsp. *stoechas*), Deli ada çayı (*Stachys cretica* subsp. *lesbiaca*), Filiz (*Tamus communis* subsp. *cretica*), Fincan çayı (*Sideritis perfoliata*), Gelindili (*Centaurea solstitialis* subsp. *solstitialis*), Haryerpa (*Laurus nobilis*), Kak otu (*Origanum vulgare* subsp. *hirtum*), Karaburun (*Lavandula stoechas* subsp. *stoechas*), Kazdağı köknarı (*Abies nordmanniana* subsp. *equi-trojani*), Kuzu pırnar, Kuzu pıynar (*Phillyrea latifolia*), Morbaş (*Lavandula stoechas* subsp. *stoechas*), Moşafla (*Salvia tomentosa*), Moşaplı (*Salvia fruticosa*), Münever (*Sambucus nigra*), Nefte (*Laurus nobilis*), Yellimkara (*Viscum album* subsp. *album*), Yeşil çay (*Micromeria myrtifolia*) and Yılan mısırı (*Dracunculus vulgaris*).

Some of the plants in Tables 1, 2 and 3 are popular in Turkey and are recorded in many ethnobotanical studies. They are as follows*: Alkanna tinctoria*, *Allium sativum*, *Centaurea solstitialis* subsp. *solstitialis*, *Cerasus avium*, *Ceterach officinarum, Crataegus monogyna, Cupressus sempervirens, Cydonia oblonga, Daucus carota, Ecballium elaterium, Elaeagnus angustifolia, Ficus carica* subsp. *carica, Hedera helix, Hyoscyamus niger, Hypericum perforatum, Juglans regia, Juniperus oxycedrus, Laurus nobilis, Lavandula stoechas, Malva nicaeensis*, *Malva sylvestris*, *Melissa officinalis, Mentha longifolia, Mentha pulegium, Mentha spicata, Morus alba, Nerium oleander, Olea europaea* var. *europaea, Origanum majorana, Origanum vulgare, Paliurus spina-christi, Papaver rhoeas, Pinus brutia*, *Pinus nigra* subsp. *nigra* var. *caramanica, Plantago major, Platanus orientalis, Rosa canina, Rosmarinus officinalis, Rumex crispus, Rubus canescens, Rubus sanctus, Sambucus nigra, Tamus communis, Teucrium chamaedrys, Teucrium polium, Thymbra spicata* var. *spicata, Urtica dioica, Urtica urens, Viscum album* and *Zea mays* subsp. *mays*.

We compared our study with other comprehensive ethnobotanical studies on folk medicinal plants already carried out in the neighbouring areas (11, 14, 20, 34, 35, 36) and presented in Table 1. According to this table, *Lavandula stoechas* subsp. *stoechas* recorded in six localities is the most common herbal medicinal plant in Bayramic and its surroundings.

According to the results of the comparison of the traditional plant uses in literature, *Lagoecia cuminoides* was recorded in Turkey for the first time. In addition, the new plant uses belonging to 29 species were marked as bold in Table 1.

Table1- The folk medicinal plants of Bayramiç (Çanakkale-Turkey)

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Abies nordmanniana **(Stev.) Spach subsp. *equi-trojani*** **(Aschers. et Sint. ex Boiss.) Coode et Cullen (Pinaceae), MARE 10877**	**Andız çam, Kazdağı köknarı**	**Cones Cones**	**Stomach ailments Bronchitis**	**Decoction, int., before breakfast Decoction, int.**	**3 4**	**16 24**	**0.30**	**(3)[b]**
Achillea nobilis **L. subsp. *neilreichii*** **(Kerner) Formánek (Asteraceae), MARE 9521, 9680**	**Mayasıl otu**	**Capitulum Capitulum**	**Hemorrhoids Eczema**	**Infusion, int. Infusion, int.**	**1 1**	**15 15**	**0.22**	
Achillea nobilis **L. subsp. *sipylea*** **(O. Schwarz) Bässler (Asteraceae), MARE 10200**	**Kabe fesleğeni, Mayasıl otu**	**Aerial parts**	**Hemorrhoids**	**Infusion, int.**	**1**	**15**	**0.11**	**Hemorrhoids (7)**
Allium sativum **L.[a] (Liliaceae), MARE 10567**	**Sarımsak**	**Bulbils Bulbils Bulbils**	**Bee bite Earache Against high blood pressure**	**Crushed, ext. Cooked (in olive oil), then crushed, dropped into the ear Eaten**	**20 3 1**	**72 11 9**	**0.68**	**Earache (1,5) Against high blood pressure (2)**
Anthemis tinctoria **L. var. *tinctoria*** **(Asteraceae), MARE 9626, 10146, 10909, 10950**	**Sarı papatya, Papatya**	**Capitulum**	**Cold**	**Infusion, int.**	**1**	**12**	**0.09**	
Asphodelus aestivus **Brot. (Liliaceae), MARE 9488, 10060**	**Hıdırellezkamçısı, Nünü**	**Roots Roots Roots**	**Stomach ailments Eczema Hemorrhoids**	**Eaten Eaten Decoction, int.**	**3 1 2**	**12 6 8**	**0.19**	**Hemorrhoids (4,5) Eczema (6) Stomach ailments(2) (7)[b]**

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Asplenium adiantum-nigrum L. (Aspleniaceae), MARE 9552	Mayasıl otu	Leaves	Hemorrhoids	Infusion, int., 2x1 for one week	1	4	0.03	(4) [b]
Centaurea solstitialis L. subsp. *solstitialis* (Asteraceae), MARE 9610, 9642, 10106, 10124, 10999	Çakır diken, Çakırca, Çakırca diken, Gelindili	Aerial parts	Malaria	Decoction, int.	3	14	0.10	Malaria (1, 5)
Cerasus avium (L.) Moench [a] (Rosaceae), MARE 9512	Kiraz	Fruit stalks	Diuretic	Infusion, int.	1	15	0.11	
Ceterach officinarum DC. (Aspleniaceae), MARE 11159	Altın otu	Aerial parts	Kidney ailments	Infusion, int.	1	15	0.11	Kidney ailments (7) (2, 3, 6) [b]
Cistus creticus L. (Cistaceae), MARE 9556, 9682, 10062,10100, 10162, 10543, 10906	Pamuklar	Leaves	Cuts	Crushed, ext.	1	15	0.11	Cuts (3,4) (2,7) [b]
Cistus salviifolius L. (Cistaceae), MARE 9553, 10917	Pamuklar	Leaves	Cuts	Crushed, ext.	1	15	0.11	Cuts (3,4) (2) [b]
Clematis vitalba L. (Ranunculaceae), MARE 10223, 10444, 11006	Deli asma	Leaves	Rheumatism	Ext.	1	15	0.11	
Cnicus benedictus L. subsp. *benedictus* (Asteraceae), MARE 9571	Diken	Aerial parts	Kidney stones	Decoction, int., 1x1	1	12	0.09	Kidney stones (2,5)
Crataegus monogyna Jacq. subsp. *monogyna* (Rosaceae), MARE 9517, 9635, 10214	Yemişen	Flowers	Against high blood pressure	Infusion, int.	1	15	0.16	(2,4) [b]
		Flowers	Bronchitis	Infusion, int.	1	6		
Cupressus sempervirens L. var. *sempervirens* [a] (Cupressaceae), MARE 10571	Selvi	Cones	Hair restorer	Ashes of Burnsed cones (+ olive oil), ext.	1	15	0.11	(5) [b]
Cydonia oblonga Miller [a] (Rosaceae), MARE 9490, 9607, 10066	Ayva	Leaves	Cough	Infusion, int.	15	74	0.59	
		Leaves	Digestive	Infusion, int.	1	6		(1,2, 4, 5) [b]
Daucus carota L. (Apiaceae), MARE 9554, 9685, 10218, 10443	Arnamus otu,	Aerial parts	Diabetes	Infusion, int.	1	6	0.10	(3) [b]
	Kokar ot, Mayasıl otu	Aerial parts	Hemorrhoids	Infusion, int.	1	8		
Dracunculus vulgaris Schott (Araceae), MARE 9600, 10548		Fruits	Eczema	Int.	1	4	0.36	
	Kabarcık, Yılankamçısı, Yılankılıcı, Yılan burçağı, Yılan mısırı	Fruits	Chapped hand and foot	Crushed, ext., wrapped in a cloth	1	4		Eczema (5,6)
		Fruits	Cancer	Int.	1	5		Hemorrhoids (2,4,5,6)
		Fruits	Hemorrhoids	Int., eaten	4	13		(7) [b]
		Tuber	Eczema	Decoction, ext.	1	8		
		Tuber	Rheumatism	Cuts into the small pieces, ext., wrapped in a cloth	1	4		
		Tuber	Rheumatism	Cuts into the small pieces then wait into alcohol, ext., wrapped in a cloth	1	6		
		Leaves	Headache	Crushed, ext., wrapped in a cloth	1	5		
Ecballium elaterium (L.) A. Rich. (Cucurbitaceae), MARE 9638	Deli bostan	Fruits	Rheumatism	Crushed, ext., wrapped in a cloth	1	6	0.24	Rheumatism (2, 5)
		Fruits	Icterus	Dropped into the nostrils	2	10		Sinusitis (1, 2, 5)
		Fruits	Sinusitis	Dropped into the nostrils	2	9		Icterus (1, 4, 6)
		Roots	Rheumatism	Crushed, ext.	1	2		
		Leaves	Boil	Crushed, ext., wrapped in a cloth	1	6		
Elaeagnus angustifolia L. [a] (Elaeagnaceae), MARE 9595, 10038	İğde	Fruits	Kidney stones	Infusion, int.	2	7	0.07	Kidney stones (4)
		Fruits	Eye ailments	Infusion, ext.	1	3		(2, 7) [b]
Euphorbia seguieriana Necker subsp. *seguieriana* (Euphorbiaceae), MARE 9505, 10088	Sütleğen	Latex	Malaria (babies and children)	(+ flour), int.	1	15	0.11	

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Ficus carica L. subsp. *carica* (Moraceae), MARE 10537, 10552, 10561, 10580	İncir, Yemiş	Leaves & branch	Nasal bleeding	Heated, inhaled	1	4	0.30	Wart (2,5)
		Leaves						Eczema (4)
		Latex	Eczema	Infusion, int.	1	6		Insect bite (2)
		Latex	Wart	Ext.	3	16		
			Scorpion-insect bite	Ext.	3	14		
Hedera helix L. (Araliaceae), MARE 10911	Sarmaşık, Sarmaşlık	Leaves	Kidney ailments	Infusion, int.	1	3	0.04	Kidney ailments (2)
		Leaves	Kidney stones	Infusion, int.	1	3		
Hyoscyamus niger L. (Solanaceae), MARE 9574	Diş otu	Seeds	Tooth ache	Boiled, inhaled	1	6	0.04	Tooth ache (2, 5, 6)
Hypericum perforatum L. (Guttiferae), MARE 9503, 9524, 9567, 9580, 9588, 9592, 9620, 9677, 10161,10905	Kantaron	Flowering branches	Stomach ailments	Infusion, int.	7	40	0.58	
		Flowering branches						Wound (2,3,4,5)
		Flowering branches	Wound	Oleat, ext.	2	19		Rheumatism (3,4)
		Flowering branches	Rheumatism	Infusion, int.	1	4		Stomach ailments (2,5,7)
			Menstrual pain	Infusion, int.	1	15		
Juglans regia L. [a] (Juglandaceae), MARE 9498, 10065, 10099, 10570, 10919	Ceviz, Koz	Immature fruits	Goiter	Boiled (40 Fruits+ 1 litre water), int., before breakfast	2	15	0.28	(2,4) [b]
		Immature fruits	Eczema	Crushed, ext.	3	11		
		Immature fruits	Hemorrhoids	Crushed, ext. (+honey) int., 1x2	1	12		
Juniperus foetidissima Willd. (Cupressaceae), MARE 10157	Kara ardıç	Cones	Against high blood pressure	Crushed mixed with honey, inhaled	1	15	0.11	
Juniperus oxycedrus L. subsp. *oxycedrus* (Cupressaceae), MARE 9528, 10112, 10185, 10455, 10989	Ardıç, Bodur ardıç, Dikenli ardıç	Cones	Shorthness of breath	Decoction, int., before breakfast	6	40	0.52	Rheumatism (4)
		Cones		Decoction, int.	1	6		Shortness of breath (4)
		Cones	Diuretic	Decoction, int.	1	8		Wound (2)
		Pix	Rheumatism	Ext. wrapped in a cloth	1	8		(7) [b]
		Pix	Fracture Wound	Ext. wrapped in a cloth	1	8		
Lagoecia cuminoides L. (Apiaceae), MARE 10046	Pülüskün	Whole plant	Abdominal pain	Infusion, int.	1	5	0.04	
**Laurus nobilis* L. (Lauraceae), MARE 9650	Defne, Haryerpa, Nefte	Leaves	Stomach ailments	Infusion, int.	1	6		Shortness of breath (7) (5 (2) [b]
		Leaves	Shortness of breath	Infusion, int., 1x1	1	6	0.09	
Lavandula stoechas L. subsp. *stoechas* (Lamiaceae), MARE 9496, 9596, 9618, 10590	DedeBurnsu, Karabaş otu, Karaburun, Morbaş	Aerial parts	Heart diseases	Infusion, int.	20	66	0.66	Stomach ache (2,5,7)
		Aerial parts	Stomachache	Infusion, int.	1	10		Heart diseases (2, 3,4 ,5, 6)
		Aerial parts	Cold	Infusion, int.	1	5		
		Aerial parts	Shortness of breath	Infusion, int.	1	4		
		Aerial parts	Immunostimulan	Infusion, int.	1	4		
Lepidium sativum L. subsp. *sativum* [a] (Cruciferae), MARE 9537	Tere	Seeds	Goiter	Int., before breakfast	1	2	0.02	
Malva nicaeensis All. (Malvaceae), MARE 9484	Develik, Ebe gümeci	Roots	Abortive	Int.	1	8	0.18	(4) [b]
		Flowers	Cough	Infusion, int.	1	10		
		Leaves	Kidney ailments	Infusion, int.	1	6		
Malva sylvestris L. (Malvaceae), MARE 9669, 10073, 10538, 10549, 10556, 10592, 11002	Develik, Ebe gümeci	Roots	Abortive	Int.	4	36	0.27	Abortive (1) (2,7) [b]
Matricaria chamomilla L. var. *chamomilla* (Asteraceae), MARE 9575, 9679	Ak papaçya, Papaçya, Papatya	Capitulum	Abdominal pain	Infusion, int.	1	15	0.19	(5) [b]
		Capitulum	Dandruff	Infusion, ext.	2	10		
Matricaria chamomilla L. var. *reCutsita* (L.) Grierson [*Matricaria chamomilla* L.] (Asteraceae), MARE 9494, 9500, 10063, 10569, 10577, 10589	Papaçya, Papatya	Capitulum	Abdominal pain	Infusion, int.	2	13		(4) [b]
		Capitulum	Stomach ailments	Infusion, int.	1	4	0.31	
		Capitulum	Heart diseases	Infusion, int.	1	15		
		Capitulum	Cough	Infusion, int.	1	10		
Melissa officinalis L. (Lamiaceae), MARE 9487, 9507, 9563, 9590, 9602, 9652, 10040, 10449 10155	Arı otu, Limon otu, Limon çiçeği, Oğul otu	Leaves	Heart diseases	Infusion, int.	2	17	0.13	Heart diseases (2,4) (7) [b]

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Mentha longifolia (L.) Hudson subsp. *thyphoides* (Briq.) Harley var. *thyphoides* (Lamiaceae), MARE 9662, 10207	Nane	Aerial parts	Rheumatism	Crushed, ext., wrapped in a cloth	1	5	0.04	(2) [b]
Mentha pulegium L. (Lamiaceae), MARE 9681	Deli nane	Aerial parts	Stomach ailments	Infusion, int.	1	15	0.11	(4,6,7) [b] Stomach ailments (2)
Mentha spicata L. subsp. *spicata* (Lamiaceae), MARE 10105	Nane	Aerial parts	Stomachache	Infusion, int.	1	4	0.03	(1) [b]
Mentha spicata L. subsp. *tomentosa* (Briq.) Harley (Lamiaceae), MARE 9666, 11008	Deli nane, Yabani nane	Leaves	Rheumatism	Crushed, ext., wrapped in a cloth	1	15	0.11	(2, 4) [b]
Micromeria juliana (L.) Bentham ex Reichb. (Lamiaceae), MARE 9585, 9598, 9605	Kekik, Taş kekiği	Flowering branches	Stomach ailments	Infusion, int.	3	9	0.07	(5,6) [b]
Micromeria myrtifolia Boiss. et Hohen. (Lamiaceae), MARE9659	Yeşil çay	Aerial parts	Cold	Infusion, int.	1	10	0.07	(3) [b] Cold (2)
Morus alba L. [a] (Moraceae), MARE 9588, 10042, 10107,10836	Kara dut	Fruits juice	Mouth diseases, antifungal (for babies)	Int.	2	9	0.07	(5) [b]
Nerium oleander L. [a] (Apocynaceae), MARE 9526, 9579	Ağıdalı, Zakkum	Leaves	Rheumatism	Crushed, ext., wrapped in a cloth	1	3	0.02	(3,6) [b] Rheumatism (2)
Olea europaea L. var. *europaea* [a] (Oleaceae), MARE 9617, 10439, 10574	Zeytin	Leaves	Against high blood pressure	Infusion, int.	1	6	0.62	Wound (5) Against high blood pressure (1) (2) [b]
		Leaves	Shortness of breath	Infusion, int.	1	15		
		Fruits	Antipyretic	Olive oil (+ vinegar), ext.	6	22		
		Fruits	Development of bones (for babies)	Olive oil, ext.	3	18		
		Fruits	Fracture	Olive oil, ext.	2	12		
		Fruits	Wound	Crushed , ext.	2	10		
Origanum majorana L. [a] (Lamiaceae), MARE 9597	Mercanköşk	Flowers&leaves	Stomachache	Decoction, int.	5	21	0.18	Stomach ache (5) (7) [b]
		Flowers&leaves	Cold	Infusion, int.	1	3		
Origanum onites L. (Lamiaceae), MARE 9488, 9599,10039	Kekik	Aerial parts	Stomachache	Infusion, int.	2	4	0.03	(2,5,6,7) [b]
Origanum vulgare L. subsp. *hirtum* (Link) Ietswaart (Lamiaceae), MARE 9545, 9548, 9550, 9576, 9589, 9614, 9631, 10102, 10104, 10134, 10904	Güve otu, Kak otu, Kekik	Aerial parts	Stomach ailments	Infusion, int.	11	43	0.44	(2,4,6) [b]
		Aerial parts	Diabetes	Infusion, int.	1	4		
		Aerial parts	Gingivitis	Volatile oil, ext.	1	12		
Paliurus spina-christi Miller (Rhamnaceae), MARE 9481, 9581, 10991	Çaltı	Fruits	Diarrhea	Infusion, , int.	1	6	0.19	(2,4,5,6) [b]
		Fruits	Heart diseases	Infusion, int.	1	15		
		Fruits	Bronchitis	Infusion, int.	1	4		
Papaver rhoeas L. (Papaveraceae), MARE 10070, 10536, 10546, 10560, 10578, 10591	Gelincik	Young fruits	Cough	Decoction, int.	1	8	0.13	Sedative (5)
		Young shoots	Sedative	Cooked, int.	1	9		
Pinus brutia Ten. (Pinaceae), MARE 9493, 9506, 10440	Çam, Kızıl çam	Terebinthine	Stomach ailments	Filtered, , int.	7	44	0.64	Stomach ulcer (2,5) Cuts (2)
		Terebinthine		—, ext.	4	29		
		Terebinthine	Cuts	(+ honey), int.	1	4		
		Terebinthine	Stomach ulcer	—, ext.	1	6		
		Terebinthine	Chapped hand and foot	Boiled, ext.	1	4		
			Burns					
Pinus nigra J.F. Arnold subsp. *nigra* var. *caramanica* (Loudon) Rehder (Pinaceae), MARE 10851	Kara çam	Immature cones	Shortness of breath	Decoction, int.	1	10	0.07	
		Terebinthine	Wound	Ext.	1	15	0.11	
Pinus pinea L. [a] (Pinaceae), MARE 9612	Fıstık çamı, Kürnar	Seeds	Bronchitis	Roasted (+honey) , int., before breakfast	1	6	0.04	
Plantago major L. subsp. *intermedia* (Gilib.) Lange [Plantago intermedia DC.] (Plantaginaceae), MARE 9584, 10936	Damar otu	Leaves	Bee bite	Ext.	1	11	0.13	Wound (2,5)
		Leaves	Wound	Ext.	1	6		

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Platanus orientalis L. (Platanaceae), MARE 9515, 10996	Çınar	Fruits Fruits Fruits	Kidney stones Shortness of breath Diarrhea	Infusion, int. Decoction, int. Decoction, int.	2 2 1	20 8 9	0.27	Kidney stones (2,4) Diarrhea (2)
Plumbago europaea L. (Plumbaginaceae), MARE 9658, 10588	Serkele	Leaves	Eczema	Crushed, ext., wrapped in a cloth	1	9	0.07	(5) [b]
Pteridium aquilinum (L.) Kuhn (Hypolepidaceae), MARE 9530, 9621, 10551, 10903	Akıllı eğrelti, Eğrelti	Leaves	Eczema	Infusion, ext.	1	3	0.02	
Pyrus amygdaliformis Vill. subsp. *amygdaliformis* (Rosaceae), MARE 9667, 10557, 10992	Ahlat, Alat	Young shoots	Scorpion-insect bite	Crushed (+ yoghurt), ext.	1	8	0.06	(5) [b]
Rosa canina L. (Rosaceae), MARE 9531, 10550	Deli gül, İt gülü, KuşBurnsu, Yabani gül	Fruits	Cold	Decoction , int.	3	18	0.13	Cold (2,5) (7) [b]
Rosmarinus officinalis L. [a] (Lamiaceae), MARE 9489, 9534, 10056	Biberiye, Biberyane	Flowers & leaves Flowers & leaves Flowers & leaves Flowers & leaves	Cold Heart diseases Stomachache Abdominal pain	Infusion, int. Infusion, int., before breakfast Infusion, int. Infusion, int.	1 3 4 1	2 11 13 6	0.24	Cold (1,2,5)
Rubus canescens DC. var. *canescens* [*Rubus tomentosus* Borkh. var. *canescens* (DC.) Wirtg.] (Rosaceae), MARE 9644,10140	Böğürtlen, Karamık, Karantı	Young shoots	Diabetes	Infusion, int., before breakfast	2	19	0.14	(2,4) [b]
Rubus canescens DC. var.*glabratus*(Gordon) Davis et Meikle [*Rubus tomentosus* Borkh. var. *canescens* (DC.) Wirtg.] (Rosaceae), MARE 10913, 10940, 11001	Böğürtlen, Karantı	Young shoots	Wound	Crushed, ext., wrapped in a cloth	1	5	0.04	
Rubus sanctus Schreber [*Rubus ulmifolius* Schott subsp. *sanctus* (Schreb.) Sudre] (Rosaceae), MARE 9634, 9655	Böğürtlen,Karamık, Karantı	Young shoots Leaves	Diabetes Burns	Infusion, int. Crushed, ext., wrapped in a cloth	1 1	15 15	0.11 0.11	Diabetes (1,6) (2,4) [b]
Rumex crispus L. (Polygonaceae), MARE 10231, 10935, 11004	İlabada	Fruits	Goiter	Infusion, int., 1x1, for one week	1	16	0.12	
Ruta chalepensis L. (Rutaceae), MARE 10121	Kokar sedef, Sedef otu	Flowers Leaves	Antipyretic (for babies) Abortive	Ext., wrapped in a cloth Int.	1 1	9 5	0.10	Abortive (1) Antipyretic (1) Antipyretic (5)
Salvia fruticosa Miller [a] (Lamiaceae), MARE 9561, 9573	Ada çayı, Moşapla,Moşaplı	Aerial parts Aerial parts Aerial parts	Headache Sore throat Stomach ailments	Infusion, int. Infusion, int. Infusion, int. ,before breakfast	1 1 1	3 2 4	0.07	(1,4,5,6,7) [b]
Salvia tomentosa Miller (Lamiaceae), MARE 9674, 10057, 10098, 10163	Ada çayı, Hoşaflama, Moşafla, Moşapla	Aerial parts	Abdominal pain	Infusion, int.	1	8	0.06	(2,4) [b]
Sambucus ebulus L. (Caprifoliaceae), MARE 10119	Sultan otu	Leaves	Rheumatism	Infusion, ext.	1	4	0.03	Rheumatism (4)
Sambucus nigra Miller (Caprifoliaceae), MARE 9480	Münever	Leaves	Cough	Infusion, int.	1	6	0.04	(2,4) [b]
Sideritis perfoliata L. (Lamiaceae), MARE 9478, 9541, 9542, 10198	Fenerli çay, Fincan çayı, Kandil çayı, Kandilli çay	Aerial parts Aerial parts Aerial parts	Cold Bronchitis Stomach ailments	Infusion, int. Infusion, int. Infusion, int.	2 1 2	6 8 11	0.19	Cold (7) (6) [b]
Sideritis trojana Bornm. (Lamiaceae), MARE 9516, 9628, 9615, 10182	Kazdağı çayı, Tüylü çay	Aerial parts Aerial parts Aerial parts Aerial parts Aerial parts	Stomach ailmnets Abdominal pain Laxative Kidney ailments Sore throat	Infusion, int. Infusion, int. Infusion, int. Infusion, int. Infusion, int.	10 4 3 1 2	50 13 7 4 9	0.62	Stomach ailments (2)

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Stachys cretica L. subsp. *lesbiaca* Reichb. fil. (Lamiaceae), MARE 9601, 10053	Deli ada çayı	Aerial parts	Stomach ailments	Infusion, int.	2	8	0.06	Stomach ailments (2)
Tamus communis L. subsp. *cretica* (L.) Kit Tan [*Dioscorea communis* (L.) Caddik et Wilkin] (Dioscoreaceae), MARE 9560,10212	Acıfiliz, Filiz, Gavur börülcesi, Sarmaşıkfilizi	Roots	Rheumatism	Cuts into small pieces, ext., wrapped in a cloth	4	23	0.21	Rheumatism (2)
		Roots	Wound	Grated and kept in olive oil for 2-3 days, ext.	2	5		
Teucrium chamaedrys L. subsp. *lydium* O. Schwarz (Lamiaceae), MARE 10054, 10163a	Mayasıl otu	Aerial parts	Eczema	Infusion, int.	2	21	0.16	(2,3,4,7) [b]
Teucrium polium L. (Lamiaceae), MARE 9556, 9640	Mayasıl otu	Aerial parts	Hemorrhoids	Infusion, int.	1	9	0.10	Hemorrhoids (1,6)
		Aerial parts	Eczema	Infusion, int., before breakfast	1	4		Eczema (1,6) (2,7) [b]
Thymbra spicata L. var. *spicata* (Lamiaceae), MARE9547, 9591	Kekik, Kır çayı, Kır kekiği	Aerial parts	Stomach ache	Infusion, int.	1	6	0.17	
		Aerial parts	Diabetes	Infusion, int.	1	5		Stomachache (5)
		Aerial parts	Cold	Infusion, int.	1	12		Diabetes (2,5,6) Cold (2)
Thymus longicaulis C. Presl subsp. *chaubardii* (Boiss. et Heldr. ex Reichb. fil.) Jalas var. *chaubardii* (Lamiaceae), MARE 9683	Taş kekiği	Aerial parts	Stomach ailments	Infusion, int.	1	15	0.11	(2) [b]
Thymus zygioides Griseb. var. *lycaonicus* (Čelak.) Ronniger (Lamiaceae), MARE 9479, 10593	Kekik, Kır çayı, Taş kekiği	Aerial parts	Stomachache	Infusion, int.	2	10	0.10	(2) [b]
		Aerial parts	Diabetes	Infusion, int.	1	4		
Tilia argentea Desf. ex DC. [a] [*Tilia tomentosa* Moench] (Tiliaceae), MARE 9499, 9608, 9657, 10059, 11011	Ihlamur	Flowers	Cold	Infusion, int.	10	42	0.37	Cold (2,5)
		Flowers	Sore throat	Infusion, int.	1	8		
Tilia rubra DC. subsp. *caucasica* (Rupr.) V. Engler [a] (Tiliaceae), MARE 9527	Ihlamur	Flowers	Cold	Infusion, int.	1	8	0.10	Cold (7)
		Flowers	Against intestinal infection	Infusion, int.	1	6		
Tussilago farfara L. (Asteraceae), MARE 10924	Kırkpınar otu	Leaves	Wound	Crushed, ext., wrapped in a cloth	1	3	0.02	Wound (4)
Urtica dioica L. (Urticaceae), MARE 9511, 9622, 10148, 10564, 10918	Deli ısırgan, Isırgan	Aerial parts	To protect cancer	Infusion, int.	3	33	0.30	Hemorrhoids (2,4,6, 7)
		Aerial parts	Hemorrhoids	Infusion, int.	1	4		
		Aerial parts	Itch	Infusion, int.	1	4		
Urtica urens L. (Urticaceae), MARE 9483, 9510, 9582, 10048, 10456, 10545, 10588	Akıllı ısırgan, Isıran, Isırgan	Aerial parts	Kidney disease	Infusion, int., 2x1	1	8	0.47	
		Aerial parts	Stomach ailments	Infusion, int.	2	13		Analgesic (4)
		Aerial parts	To protect cancer	Infusion, int.	3	26		
		Aerial parts	Immunostimulan	Infusion, int.	2	9		
		Aerial parts	Urethra diseases	Infusion, int., before breakfast, 1x1	2	7		
Viscum album L. subsp. *album* (Loranthaceae), MARE 9648, 10594	Yellimkara	Whole plant	Mentsrual regulator	Decoction, int.	3	14	0.10	(2,6,7) [b]
Vitex agnus-castus L. (Lamiaceae), MARE 9577, 9647, 9660	Ayıt	Fruits	Eczema	Decoction, int. before breakfast, 1x1	1	6	0.66	Headache (1,2,5) Abdominal pain (1,5) Antipyretic (1) (7) [b]
		Fruits	Abdominal pain	Int.	1	8		
		Leaves	Adominal pain (for babies)	Crushed, ext., wrapped in a cloth	3	11		
		Leaves	Headache	Crushed, ext., wrapped in a cloth	6	29		
		Leaves	Antipyretic	Crushed, ext., wrapped in a cloth	5	17		
		Leaves	Chapped hand and foot	Put into the shoes or sock, ext.	1	9		
		Young shoots	Eczema	Infusion, int.	1	9		
Zea mays L. subsp. *mays* [a] (Poaceae), MARE 9673	Darı, Mısır	Stylus	Diuretic	Infusion, int.	3	26	0.19	

Table 2- The plants used in veterinary medicine (Bayramiç-Çanakkle/Turkey)

Botanical name, family and Voucher specimen	Local names	Part(s) used	Ailments treated/ Therapetic effect	Preparations/ Administration, Dosage	Citations (number of villages)	Reports	CI	Similar usage in literature
Dracunculus vulgaris **Schott (Araceae), MARE 9600, 10548**	**Kabarcık,Yılankamçısı, Yılankılıcı, Yılan burçağı, Yılan mısırı**	**Tuber**	**Oedema**	**Boiled with milk, ext.**	**1**	**4**	**0.03**	
Pinus brutia **Ten. (Pinaceae), MARE 9493, 9506, 10440**	**Çam, Kızıl çam**	**Leaves**	**Afterpains**	**Boiled, ext.**	**1**	**3**	**0.02**	**(2)** [b]
Phillyrea latifolia **L. (Oleaceae), MARE 9492, 9532, 9572, 10118**	**Kuzu pırnar, Kuzu pıynar, Pırnar, Pıynar**	**Leaves**	**Eye ailments**	**Crushed or chewed, ext.**	**11**	**57**	**0.42**	**Eye ailments (4,5)**
Vitex agnus-castus **L. (Lamiaceae), MARE 9577, 9647, 9660**	**Ayıt**	**Fruits**	**Constipation**	**Crushed, int.**	**1**	**5**	**0.04**	

Int.: internal use and Ext.:external use. a Cultivated plant: (1) Bulut and Tuzlacı (2009), (2) Polat and Satıl, 2012, (3) Saçlı, (1996), (4) Tuzlacı and Aymaz, (2001), (5) Tuzlacı and Emre Bulut, (2007) and (6) Tümen and Sekendiz (1990) (7) Uysal et al., (2012) b Different usage; the new plant uses were marked as bold.

Table 3- Multiherbal recipes used as folk medicine in Bayramiç

Recipe	Plant	Plant part used	Ailments treated, therapeutic effect	Preparation	Administration
1	***Cupressus sempervirens*** **L. var. *sempervirens***	**Cones**	**Tootache**	**Decoction**	**Gargle**
	Pinus brutia **Ten.**	**Firewood**			
2	***Abies nordmanniana*** **(Stev.) Spach subsp. *equi-trojani* (Aschers. et Sint. ex Boiss.) Coode et Cullen**	**Cones**	**Bronchitis**	**Infusion**	**Int.**
	Tilia argentea **Desf. ex DC.**	**Flowers**			
3	***Alkanna tinctoria*** **(L.) Tausch subsp. *tinctoria***	**Roots**	**Chapped hand and foot**	**Crushed then boiled with olive oil and beewax**	**Ext.**
	Asphodelus aestivus **Brot.**	**Roots**			
	Cistus creticus **L.**	**Leaves**			
	Pinus brutia **Ten.**	**Terebinthine**			
4	***Asphodelus aestivus*** **Brot.**	**Roots**	**Wound**	**Crushed then beewax added**	**Ext.**
	Pinus brutia **Ten.**	**Terebinthine**			
5	***Hypericum perforatum*** **L.**	**Flowering branches**	**Chapped hand and foot**	**Crushed then wiated into olive oil**	**Ext.**
	Pinus brutia **Ten.**	**Terebinthine**			
6	***Cerasus avium*** **(L.) Moench**	**Fruits stalk**	**Kidney stones**	**Decoction**	**Int.**
	Zea mays **L. subsp. *mays***	**Stylus**			
7	***Hypericum perforatum*** **L.**	**Flowering branches**	**Stomach ailments**	**Infusion**	**Int.**
	Sideritis trojana **Bornm.**	**Aerial parts**			
8	***Origanum vulgare*** **L. subsp. *hirtum*** **(Link) Ietswaart**	**Aerial parts**	**Nausea**	**Infusion**	**Int.**
	Melissa officinalis **L.**	**Aerial parts**			
9	***Origanum vulgare*** **L. subsp. *hirtum*** **(Link) Ietswaart**	**Aerial parts**	**Cold**	**Infusion**	**Int.**
	Tilia argentea **Desf. ex DC.**	**Flowers**			
10	***Sideritis trojana*** **Bornm.**	**Aerial parts**	**Cold**	**Infusion**	**Int.**
	Tilia argentea **Desf. ex DC.**	**Flowers**			

Harmful effects of medicinal plants

According to the statements of the informants, *Clematis vitalba, Euphorbia seguieriana* subsp. *seguieriana, Mentha spicata* subsp. *tomentosa, Nerium oleander, Plumbago europaea, Ruta chalepensis* and *Tamus communis* subsp. *cretica* should be used carefully because an overdose might be dangerous.

Data analysis

The top five species cited with the greatest number of UR (in brackets) are *Allium sativum* (92), *Lavandula stoechas* subsp. *stoechas* (89), *Vitex agnus-castus* (89), *Pinus brutia* (87), *Olea europaea* subsp. *europaea* (83), *Sideritis trojana* (83) and *Cydonia oblonga* (80). This order also corresponds to the CI index values for these top five species: 0.68, 0.66, 0.66, 0.64, 062, 0.62 and 0.59, respectively (for the values of the rest of the medicinal species, see Table 1).

Allium sativum has traditionally been and is very commonly used today for bee sting, earache and as a remedy for high blood pressure in Bayramiç. In our country, it is most commonly utilized against high blood pressure. This plant is present in many households and is cultivated by many both in our country and in the world. *Lavandula stoechas* subsp. *stoechas* is used against heart disease, stomachache, the common cold, shortness of breath and as an immunostimulant. This plant, which grows in west and south Anatolia in our country, is used in the treatment of cardiovascular diseases and for colds and shortness of breath. The range of *Vitex*, *Vitex agnus-castus*, whose two species are present in Turkey, is spread out in west and south Anatolia. In this region, it is used for the treatment of eczema, abdominal pain, headache, as an antipyretic and for chapped hands and feet. Its most common use in our country is for stomach ache. *Pinus brutia* is used for stomach ailments, cuts, stomach ulcers, chapped hands and feet and burns. This tree, which grows in west and south Anatolia on the coastal side, is utilized for wounds, stomach ailments and cough. *Olea europaea* subsp. *europaea* is used for the treatment of high blood pressure, shortness of breath, fractures and wounds, as an antipyretic, and for the development of bones (for babies). In contrast, in Turkey, it is used against diabetes and high blood pressure. *Sideritis trojana,* which is an endemic plant and can only be found in Canakkale and Balikesir, is used for stomach ailments, abdominal pain, kidney ailments and sore throat and as a laxative. According to the study made in Balıkesir (34), it is used against digestive problems and colds. *Cydonia oblonga,* a very commonlyfound plant grown in Turkey, is used for cough and digestive problems. It is used in the treatment cough and gastrointestinal diseases in our country. *Hypericum perforatum*, is utilized in stomach ailments wounds, rheumatism and menstrual pain. In our country, it is widely used in the treatment of stomach ailments and wounds.

Previous laboratory studies conducted in Turkey and other parts of the world indicated the activity of some medicinal plants that were also reported by the current study. These included *Allium sativum* (antihypertensive) (37), *Lavandula stoechas* subsp. *stoechas* (antimicrobial) (38), *Sideritis trojana* (antimicrobial) (39), *Hypericum perforatum* (antimicrobial) (40) and (antidepressant) (41), *Pinus brutia* (antimicrobial), (42) and *Vitex agnus-castus* (antibacterial) (43).

The most frequent type of medicinal use record is stomach ailments (300 UR), colds (136 UR) cough (108 UR) eczema (96 UR) and rheumatism (92UR).

The results of POPUT show values for stomach ailments of 0.14, for colds 0.06, for cough 0.05 and for eczema and rheumatism 0.04.

Our calculations of the medicinal importance index (MI) (31) produced the following results: colds (21.6), stomach ailments (18.75), colds (13.6), stomachache (11.3) eczema (9.6), haemorrhoids (9.3) and rheumatism (9.2). According to these calculations, colds (136 UR) and stomachache (68 UR) and haemorrhoids (84UR) have higher ratios and appear at the bottom of list. There is no study yet that includes the medicinal importance index in Western Anatolia, except that of (31), in a study in the Mediterranean region of Anatolia that mentioned medicinal uses as gastric anti-inflammatories and tranquilisers and for hypoglycaemia.

According to these results, it is seen that the people of the region use plants to treat themselves for those diseases in which they can easily make observations themselves and need no assistance from a doctor. In addition, due to the harsh winter months, the most common disease is the common cold. In addition, shortness of breath is widely encountered because most of the interviewers are elderly.

Furthermore, 27 plant taxa that are used for treatment are also utilized for different purposes in the Bayramiç region; 22 are eaten for food, 8 are used for fuel and 4 are spices.

In the region, it has been observed that women have more information on plants than men. Moreover, this information, which is obtained in the treatment field, is colloquially known as “folk remedy/nostrum (koca kari ilaci)”. The data show that the women are better qualified regarding medicinal use of plants, not only in this region but also in other regions.

Bayramiç (Çanakkale-Türkiye) tıbbi bitkileri üzerinde etnobotanik çalışmalar

ÖZET

Türkiye'nin batısında Bayramiç yöresinde kapsamlı etnobotanik bir çalışma yürütülmüştür. Bu çalışma etnobotanik araştırma esnasında elde edilen halk ilacı bitkilerini ve etnofarmakolojik bilgiyi içermektedir. Bu çalışmanın amacı yerel halkın tedavi amacıyla kullandığı bitkileri toplamak ,tayin etmek ve geleneksel bitkisel ilaçlar hakkındaki bilgileri ortaya çıkarmaktır. Bu çalışmanın materyali bitki örnekleri olup, arazi çalışması esnasında toplanmıştır. Bilgiler açık uçlu ve yarı yapılandırılmış görüşmelerle yerel halktan elde edilmiştir. Ayrıca kültürel önem indeksi (CI), tibbi önem indeksi (MI) ve kullanım bilgisi (UR) hesaplanmıştır. Bu çalışmada, 39 familyaya ait seksen dokuz tıbbi bitki teşhis edilmiştir. Bunlardan 71 tür yabani, 18 tür yetiştirilen bitkilerdir. En yaygın familyalar ise: Lamiaceae (%25), Rosaceae (%9.1) ve Asteraceae (% 9.1)'dir. Sonuç olarak, 89 taksona ait 192 tıbbi kullanım (halk ilaçları) kaydedilmiştir. Kullanım bilgisine (UR) göre, en önemli tıbbi bitkiler ise *Allium sativum* (92 UR), *Lavandula stoechas* subsp. *stoechas* (89 UR), *Vitex agnus-castus* (89 UR), *Pinus brutia* (87 UR), *Olea europaea* subsp. *europaea* (83 UR), *Sideritis trojana* (83 UR) ve *Cydonia oblonga* (80 UR)'dır. Araştırma alanında en yaygın hazırlama metodu infüzyondur (%53.4). Özellikle dağlık alandaki köylerde geleneksel halk ilaçları halen önemlidir ve tedavide kullanılmaktadır.

Anahtar kelimeler: Etnobotanik; geleneksel tıbbi bitkiler; Bayramiç; Çananakkale; Turkey.

Conclusion

This is the first comprehensive study of traditional uses of the medicinal plants in the Bayramic district. In contrast to previous studies, the use of *Lagoecia cuminoides* was recorded as a folk medicinal plant in Turkey for the first time. Moreover, the uses of new plants belonging to 30 species were also presented. This ethnobotanical study proves that the use of traditional folk medicine is still important in the community, especially in the villages. Thus, the transfer of this knowledge from one generation to the next must be ensured. Meanwhile, ethnobotanical information about medicinal plants and health is one of the sources for related future scientific studies and is a guide to their exploration for use as modern medicines.

Acknowledgements

The authors wish to thank all of the informants who contributed to this study with their knowledge and friendship.

Appendix 1

Questionnaire Form
1. Name and surname of the participant.
2. Age and sex of the participant.
3. Telephone and address of the participant.
4. Educational level of the participant.
5. Date of interview.
6. Place of residence of the participant.
7. Duration of residence of the participant.
8. Local name of the plant.
9. Human health or Animal health.
10. Ailments treated /therapeutic effect.
11. Plant part used.
12. Preparation.
13. Administration.
14. Dosage.
15. Duration of treatment.
16. Age group of patients (baby, child, adult).
17. Side effects.
18. Different ethnobotanical use.

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