

Folk Medicines in Merzifon (Amasya, Turkey)

Nurten EZER*, Öykü MUMCU ARISAN

Hacettepe University, Faculty of Pharmacy, Department of Pharmaceutical Botany, 06100, Sıhıye, Ankara - TURKEY

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Abstract: Natural sources used as folk medicines in Merzifon were investigated in this study. It was determined that 35 plant and 4 animal species together with 3 animal and 1 inorganic sources are being used as various preparations of folk medicines in Merzifon area. All the collected medicinal plants were identified and voucher specimens were deposited in the Herbarium of Hacettepe University, Faculty of Pharmacy (HÜEF). Local names, part(s) used, methods of preparation and traditional usages of folk medicines are given in this paper. Traditional herbal medicines were mostly used for gastrointestinal system diseases, heart and circulatory system disorders. When our findings were compared with previously published literatures on folk medicines in Turkey, new local names for 4 species and different usages for 6 plants were found. Moreover, *Scorzonera eriphora* DC. and *Beta trigyna* Waldst & Kit. were found to be used as folk medicines in Turkey for the first time in this study.

Key Words: Folk medicine, Merzifon (Amasya), Turkey

Merzifon Yöresindeki Halk İlaçları (Amasya, Türkiye)

Özet: Merzifon İlçesi'nde çoğu bitkisel olmak üzere halk ilacı olarak kullanılan doğal kaynaklar araştırılmıştır. Merzifon'da 35 bitki ve 4 hayvan türü ile 3 hayvansal ve 1 inorganik kaynağın çeşitli şekillerde halk ilacı olarak kullanıldığı tespit edilmiştir. Halk ilacı olduğu belirlenerek toplanan bitkilerin tümü tayin edilmiş ve hazırlanan herbaryum örnekleri Hacettepe Üniversitesi Eczacılık Fakültesi Herbaryumu'nda (HÜEF) muhafaza edilmektedir. Bu makalede, kullanılan halk ilaçlarının yöresel adları, tedavide kullanılan kısımları, hazırlanış şekli, geleneksel kullanımı ile ilgili bilgiler verilmiştir. Bitkisel halk ilaçları en çok sindirim sistemi hastalıkları ile kalp ve dolaşım sistemi bozukluklarına karşı kullanılmaktadır. Bulgularımız Türkiye'de daha önce yayınlanmış çalışmalarla karşılaştırıldığında 4 türe ait yeni yöresel ad ve 6 bitkiye ait farklı kullanılışlar bulunmuştur. Ayrıca, *Scorzonera eriphora* DC. ve *Beta trigyna* Waldst & Kit. bitkilerinin ilk defa bu çalışmada Türkiye'de halk ilacı olarak kullanıldığı bulunmuştur.

Anahtar Sözcükler: Halk ilacı, Merzifon (Amasya), Türkiye

Introduction

Merzifon (Amasya, Turkey) is in the inner part of the middle Black Sea region and in the A5 square of the Flora of Turkey (Figure). It covers an area of 939 km² and its population is 67,195. Mount Tavşan (1800 m) is located in this area. Altitude varies between 750 m and 1800 m. The climate is warm. Summers are dry while winters and springs are rainy. The skirts of Mount Tavşan are covered with trees. Because of the little rain, the plant cover has a steppe look on the plains.

During historical periods, Merzifon area was the centre of different civilisations such as Hittite, Phrygian, Byzantine and Seljuk. As a result of its cultural diversity,

we thought that the area would be rich in terms of folk medicine.

The aim of this study was to collect information about the remaining folk medicines in Merzifon before it is completely lost. A survey of the literature revealed papers about the ethnobotanical and folk medicinal potential of Amasya (Alpınar, 1979; Fujita et al., 1995), but there are no reports about Merzifon.

Materials and Methods

The information about the local names, different usages, part(s) of plant used, method of preparation and

*E-mail: nezer@hacettepe.edu.tr

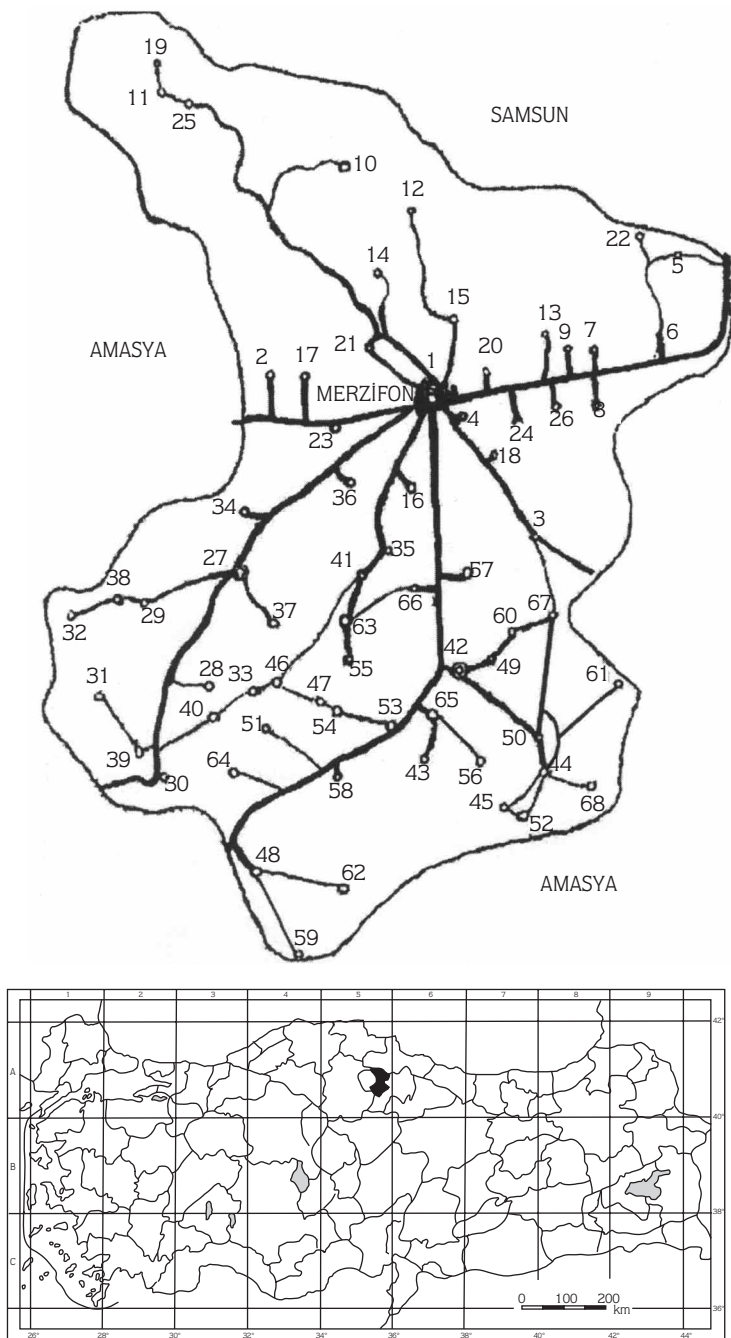


Figure. Study area: Merzifon District (Insert: Map showing the location of Merzifon in Turkey).

administration of plants was obtained from local healers, herbalists, shepherds, experienced adults and patients by filling in a questionnaire during personal interviews. For the collection of plant materials, informants were asked to bring the drug or herbal preparations they use, or to

guide us to the places where these plants grew. The interviews were accomplished with 204 individuals, 42% of which were women and 58% men. The average age was 48 for women and 53 for men. Information was compiled from 68 settlements in Merzifon. All

settlements are listed in Table 1, including reference numbers for the record place of the local information.

Research materials were collected during the spring and summer of 2002 and 2003 by the authors. The Flora of Turkey and the East Aegean Islands and Flora Europaea (Davis, 1965-1985; Tutin et al., 1968; Davis et al., 1988; Güner et al., 2000) were mainly used for the identification of medicinal plants. Identified species were compared with other specimens in herbaria. Voucher specimens of each species were deposited in the Herbarium of Hacettepe University, Faculty of Pharmacy, (HUEF).

Results and Discussion

The plants used in folk medicine in Merzifon are presented and arranged in alphabetical order of their families and botanical names along with relevant information in Table 2. Animal origin and inorganic sources used in folk medicine are given in Table 3 along with local names, traditional uses, preparation and administration. Reference numbers for the record places are also given in Tables 2 and 3.

According to the results of this research, 35 species from 23 families are recorded as folk medicine in

Merzifon. Among them, 28 species of which 2 endemics are wild and 7 species are cultivated in different families. The plants used by local people mostly belong to *Rosaceae*, *Asteraceae*, *Lamiaceae* and *Malvaceae*. It was found that 75% of usages are internal and 25% external. Although the plants are used for internal applications directly as a decoction, infusion or crude drug, they are also used for external applications as a crude drug or decoction. The aerial parts and leaves were the frequently used plant parts. These herbal folk medicines were generally used for gastrointestinal system diseases, heart and circulatory system disorders. As shown in Table 2, the most widely used plant in Merzifon is *Urtica dioica* L., which is been quoted in 12 localities for 8 different diseases. This is followed by *Plantago major* L. subsp. *major*, which is used in 7 localities to treat 6 different diseases. *Alcea apterocarpa* (Fenzl) Boiss., which is used for stomach ache, and *Scorzonera eriophora* DC., which is used to prevent throat infection, are endemic (Davis, 1965-1985).

Our findings were compared with previously published studies on folk medicine in Turkey (Alpınar, 1979; Çakırcı, 1980; Yıldırım, 1985, 1987; Öztürk & Özçelik, 1991; Sezik et al., 1991, 1992, 1997, 2001; Yeşilada et al., 1993, 1995, 1999; Tabata et al., 1994;

Table 1. The names of settlements are indicated by the following numbers.

1-Merkez	18-Yolüstü	35-Hayrettin	52-Gümüštepe
2-Akören	19-Yukarıbüyük	36-Karatepe	53-Kamışlı
3-Ortaova	20-Bahçekent	37-Karacakaya	54-Kuyu
4-Bahçecik	21-Yakacık	38-Koçköy	55-Kıyemir
5-Bayat	22-Osmanoğlu	39-Küçükçay	56-Kızıleğrek
6-Kayadüzü	23-Sarıköy	40-Demirpınar	57-Çayırözü
7-Çavundur	24-Şeyhyeni	41-Yakup	58-Çaybaşı
8-Çayırköy	25-Aşağıbüyük	42-Sarıbuğday	59-Mahmutlu
9-Çobanören	26-Gökçebağ	43-Akpınar	60-Yenice
10-Derealan	27-Alıcık	44-Alişar	61-Aktarla
11-Ortabük	28-Elmayolu	45-Bayazıt	62-Oymaağaç
12-Gelinsini	29-Bulak	46-Çamlıca	63-Oymak
13-Aksungur	30-Büyükçay	47-Türkoğlu	64-Pekmezci
14-İnalanı	31-Diphacı	48-Balgöze	65-Saraycık
15-Hırka	32-Eymir	49-Yeşilören	66-Uzunyazı
16-Sazlıca	33-Hacet	50-Çatalakaya	67-Yalınız
17-Karamağara	34-Hanköy	51-Hacıyakup	68-Esentepe

Table 2. Medicinal plants used in the Merzifon area (Amasya, Turkey).

Family and species name	Local name	Part used	Traditional uses	Preparation and administration (record place)	HUEF number
APIACEAE <i>Petroselinum crispum</i> Miller	Maydanoz	Aerial part Root Stem	For haemorrhoids To pass kidney stones For urethral inflammation	Decoction is taken orally (5) Decoction is taken orally (31) Decoction is taken orally (1)	cultivated
ASTERACEAE <i>Achillea biebersteinii</i> Afan. ^a <i>Cichorium intybus</i> L.	- Badik otu, Çitlek otu, Çitlak otu	Capitulum Aerial part Leaf	As an insect repellent For cardiac diseases For cardiac diseases	Flowers are placed in different parts of the house (58) Aerial part is eaten as salad (61) Decoction is taken orally (61)	02038 03024
<i>Helichrysum graveolens</i> (Bieb.) Sweet	Yayla çiçeği, Arı çiçeği	Flowering branch	For kidney problems	Decoction is taken orally (11,19,25)	02033 02034
^{a,b} <i>Scorzonera eriophora</i> DC.	Kök sakızı	Latex	For asthma, stomach ache As protective in throat infection	Decoction is taken on an empty stomach (19,24) Latex is chewed (22)	03025
CHENOPODIACEAE ^a <i>Beta trigyna</i> Walst & Kit.	Efelek, Efelik	Flowering branch	For asthma, bronchitis	Decoction is taken orally (22)	03023
CORNACEAE <i>Cornus mas</i> L.	Kızılak	Fruit	For sunstroke	Fruit is used for making marmalade, which is applied to the body (1)	cultivated
CUCURBITACEAE <i>Ecballium elaterium</i> (L.) A. Rich.	Acı kavun	Fruit	For sinusitis For rheumatism	Juice diluted with water (1/1), dropped into nostrils (1) Fresh fruits are pounded, kept in olive oil for 1-2 days, and applied to affected area (1)	03037
EQISETACEAE <i>Equisetum telmateia</i> Ehrh.	Çam otu, Kırkboğum	Aerial part	To pass kidney stones For prostatitis	Infusion is taken orally (22) Decoction is taken orally (29)	03019
EUPHORBIACEAE <i>Euphorbia rigida</i> Bieb.	-	Latex	To remove warts	Latex is applied to warts (26,58)	03018
FABACEAE <i>Collutea cilicica</i> Boiss. & Bal.	Hokurdak	Fruiting branch	For abscess, wound healing	Decoction is used to take bath (especially for children) (1)	02028
HIPPOCASTANACEAE <i>Aesculus hippocastanum</i> L.	At kestanesi	Seed	For arteriosclerosis	Decoction is taken orally (1)	03026
HYPERICACEAE <i>Hypericum orientale</i> L.	Sarı çiçek	Flower	As sedative	Infusion is taken orally (11,19)	02036
<i>Hypericum perforatum</i> L.	Sarı çiçek	Flower Aerial part	As sedative For stomach ache	Infusion is taken orally (11,19) Decoction is taken orally (19)	03031 03030
JUGLANDACEAE ^a <i>Juglans regia</i> L.	Ceviz	Seed membrane Seed	For arteriosclerosis As cholesterol regulator	Decoction is taken orally (56) Dried seeds are eaten (1)	03027

Table 2. (continued)

Family and species name	Local name	Part used	Traditional uses	Preparation and administration (record place)	HUEF number
LAMIACEAE					
^a <i>Salvia virgata</i> Jacq.	Elikotu, Dodil otu	Aerial part	For haemorrhoids	Aerial part is boiled in water and person sits on the bowl to expose the affected area to vapour (26)	02027
<i>Thymus praecox</i> Opiz subsp. <i>skorpilii</i> (Velen.) Jallas var. <i>skorpilii</i>	Kekik, Kekik otu, Kekük	Aerial part	For diabetes mellitus	Decoction is taken orally (57)	02025 03021
<i>Thymus sipyjeus</i> Boiss. subsp. <i>rosulans</i> (Borbás) Jallas	Kekik, Kekik otu, Kekük otu, Kekük	Leaf Leaf	For gangrenous wounds	Aerial part is boiled in "katik suyu" and the person holds the bowl to expose the gangrenous wounds to vapour (61)	
			For stomach ache	Infusion is taken on an empty stomach (1)	02023
			For stomach ache	Infusion is taken on an empty stomach (11, 19, 25)	02024
LILIACEAE					
^a <i>Allium cepa</i> L.	Soğan	Bulb	For arteriosclerosis For inflammatory wounds	Juice is taken orally (56) Bulb is cooked in embers and ash is put inside a piece of soap and applied to the affected parts (1)	cultivated
<i>Allium sativum</i> L.	Sarımsak, Sarımsak	Bulb	As antihypertensive For styte	1-2 cloves of garlic are ingested or eaten (1,15) 1 clove of garlic is cut and applied to the affected area in the eye (1)	cultivated
			For earache	1 clove of garlic is heated and while warm applied to the ear (1)	
			To treat alopecia	Bulb is cut and applied to the roots of hair (1)	
LORANTHACEAE					
<i>Viscum album</i> L. subsp. <i>album</i>	Kökçe, Gökçe, Ökse otu	Leafy branch	As anti-hypertensive	Decoction is taken orally (especially that growing on <i>Pyrus communis</i>) (1)	03017
			For diabetes mellitus	Decoction is taken orally (especially that growing on <i>Pyrus communis</i>) (1)	
			For haemorrhoids	Leafy branch is boiled in water and the person sits on the bowl to expose the affected area to vapour (especially that growing on <i>Rosa canina</i>) (33)	
MALVACEAE					
^{a,b} <i>Alcea apterocarpa</i> (Fenzl) Boiss.	Gülhatun çiçeği, Gül hatmi	Root Flower	For stomach ache	Decoction is taken orally (1)	02026
<i>Malva neglecta</i> Wallr.	Ebem kömeci, Kömec, Ebegümeçi, Ebegümeçi	Leaf	For cough, bronchitis For stomach ache For menstrual disorder For abdominal pain	Infusion is taken orally (68) Decoction is taken orally (68) Decoction is taken orally (53) Fresh leaves are cooked and eaten (28)	02037 03028 03029
MORACEAE					
<i>Morus nigra</i> L.	Kara dut	Fruit	For sore throat	Prepared as a syrup with juice and gargled (1)	cultivated
PLANTAGINACEAE					
<i>Plantago major</i> L. subsp. <i>major</i>	Sinirli ot, Bağ yaprağı, Damarlı ot, Çığarca	Leaf	For prostatitis For urethral inflammation For abscess	Decoction is taken on an empty stomach (1) Decoction is taken on an empty stomach (61) Leaves are wilted over a fire and then applied to abscess (11, 19, 20, 64)	02030 03035 03036

Table 2. (continued)

Family and species name	Local name	Part used	Traditional uses	Preparation and administration (record place)	HUEF number
PLATANACEAE <i>Platanus orientalis</i> L.	Kavlayan, Kavlağan ağacı	Aerial part Seed	For ulcer For stomach ache For urethral inflammation For diarrhoea	Dried herb is mixed with honey and ingested (19) Decoction is taken orally (25) Decoction is taken on an empty stomach (1, 20, 25) Seeds are ingested (1)	03038
POACEAE <i>Hordeum vulgare</i> L.	Arpa	Fruit	For prostatitis, urethral inflammation	Decoction is taken orally (20)	cultivated
ROSACEAE <i>Crataegus orientalis</i> Pallas ex Bleb. var. <i>orientalis</i> <i>Cydonia oblonga</i> Miller <i>Rosa canina</i> L.	Aliç	Fruit	For cardiac disorder	Roasted seeds are applied to knees (47) Oil of roasted seeds are applied to the affected area (1)	02031
<i>Rubus sanctus</i> Schreber	Ayva Kuşburnu, İtburnu	Leaf Root	For cough For haemorrhoids	Fruits are eaten (1) Decoction is taken orally (1) Decoction is taken orally (42)	cultivated 02035 03032
<i>Sorbus domestica</i> L.	Böğürtlen	Fruit	For common cold For diarrhoea, abdominal pain For haemorrhoids For diabetes mellitus	Infusion is taken orally (1,30) Made into marmalade and eaten (3,53) Decoction is taken on an empty stomach (56) Decoction is taken orally (31)	03033
<i>Salix alba</i> L.	Üvez, Övez	Leaf Leaf	For aphthae For gastritis	Fresh fruits are eaten (56) Decoction is gargled (1) Decoction is taken orally (1)	03034
URTICACEAE <i>Urtica dioica</i> L.	Söğüt, Söğüt ağacı	Stem bark	For inflammatory wounds	Stem bark is burnt and ash is spread on wounds (61)	02032
<i>Peganum harmala</i> L.	Isırgan, Isırgan otu	Aerial part	For rheumatism For cancer As intestinal regulator For stomach problems, ulcer For diabetes mellitus For goitre As hair restorer For rheumatism For cardiac diseases For rheumatism	Decoction is taken orally (22,35) Aerial part is cooked and eaten or decoction is taken orally (26, 56, 64) Decoction is taken on an empty stomach (53) Decoction is taken orally (62) Decoction is taken orally (57) Dried herb is mixed with honey and ingested (30) Decoction is used as a hair wash (56) Decoction is taken on an empty stomach (19) Decoction is taken orally (1,3) Dried seeds are mixed with honey and taken on an empty stomach (22)	02022 03022
ZYGOPHYLLACEAE <i>Peganum harmala</i> L.	Üzerlik, Yüzerlik	Seed	For rheumatism	Pounded seeds are mixed with honey and rolled into a pill form and swallowed (26)	02029 03020

a Plant with new traditional uses

b Endemic species

Table 3. Animal species, animal and inorganic sources used in folk medicine in Merzifon (Amasya, Turkey).

Animal	Local name	Part used	Medicinal uses, Ailments treated	Used and administration
Hedgehog	Kirpi	Meat	For haemorrhoids	Meat is cooked and eaten
Cow	İnek	Liver	For jaundice	Liver is applied to patient's back
Chicken	Tavuk	Membrane of gizzard	For ulcer	Dried membrane is pounded and swallowed on an empty stomach
			For urethral inflammation	Dried membrane is pounded and swallowed with honey
	Kara tavuk	Whole animal	To treat meningitis	Chicken without internal organs is worn on the head (like a cap) for meningitis
Sheep	Koyun	Tail fat	For bruises	Fat is applied to affected area
Egg	Yumurta	Shell	To strengthen the legs after polio	Egg shell is wrapped around legs
Strained yoghurt	Katkı	-	For bee stings	Applied to affected area
Butter (salty)	Tuzlu tereyağı	-	For wound healing	Applied to wounds
Clay	Kil	-	For hair and skin health	Applied to hair and skin

Fujita et al., 1995; Işık et al., 1995; Sayar et al., 1995; Honda et al., 1996; İlçim & Varol, 1996; Yazıcıoğlu & Tuzlacı, 1996; Baytop, 1997, 1999; Vural et al., 1997; Duran, 1998; Tuzlacı & Erol, 1999; Ertuğ, 2000; Koçak & Özhatay, 2000; Tuzlacı & Tolon, 2000; Duran et al., 2001; Özgen & Coşkun, 2001; Sadıkoğlu & Alpınar, 2001; Sürmeli et al., 2001; Tuzlacı & Aymaz, 2001; Ezer & Avcı, 2004; Gençler-Özkan & Koyuncu, 2005; Tuzlacı, 2005).

Six species, namely *Alcea apterocarpa* (Fenzl) Boiss. (for stomach ache), *Allium cepa* L. and *Juglans regia* L. (against arteriosclerosis), *Cichorium intybus* L. (for

cardiac disease), *Peganum harmala* L. (for rheumatism), and *Salvia virgata* Jacq. (for haemorrhoids), which were previously reported in Turkish folk medicine, are presented along with their different usages in this study (Table 2). In addition, the local names of *Cichorium intybus* L. (badik otu), *Colutea cilicica* Boiss & Bal. (hokurdak), *Plantago major* L. subsp. *major* (çığarca), and *Salvia virgata* Jacq. (ellikotu, dodil otu) are reported for the first time. Furthermore, the use in folk medicine of *Beta trigyna* Waldst & Kit, previously known as a food, and *Scorzonera eriophora* DC. is reported for the first time in Turkey.

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