Traditional Usage of Some Wild Plants in Trabzon Region (Turkey)

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Geliş Tarihi:

Abstract

Aim of this study is to identify wild plants which are used by local people for a variety of purposes like that healing, food, spices, etc. in Trabzon region. For this purpose, the field works have been done from June 2011 to September 2012. During this research Trabzon center and its district, some villages and plateaus have been visited and plant specimens were collected. The information for these plants, such as local names, their usages, used parts, methods of preparation have been recorded. In the study, 162 female, 118 male total 280 people were interviewed. 87 plant taxa 9 of which are culture plants have been identified. They are mostly used for various diseases, especially skin disorders, respiratory tract disorders, gastric disorders, diabetes, wounds, religious beliefs, fatling health and their milk and fat yields. In the present study, different uses of *Calvatia utriformis, Trifolium canescens, Castanea sativa, Fagusorientalis, Cyclamen coum* var. *caucasicum, Alnus glutinosa* subsp. *barbata*, *Colchicum speciosum, Phedimus stoloniferus, Picea orientalis* have been identified.

Key Words: Traditional uses, Medicinal and aromatic plant, Trabzon, Turkey

Trabzon İlinde Bazı Doğal Bitkilerin Geleneksel Kullanımları (Türkiye)

Özet

Bu çalışmada Trabzon ilindeki yerel halk tarafından sağlık, gıda, baharat gibi çeşitli amaçlarla kullanılan doğal bitkiler tespit edilmiştir. Araştırma Haziran 2011- Ekim 2012 tarihleri arasında gerçekleştirilmiştir. Trabzon il sınırları içindeki bazı ilçe, köy ve yaylalarda yüz yüze görüşmeler yapılmış ve bölge insanının kullandığı, bilgi verdiği bitkiler toplanmıştır. Toplanan bitkilerin yerel adları, kullanım şekilleri, kullanılan kısımları ve kullanım amaçları hakkında bilgiler kayıt altına alınmıştır. 162'si kadın, 118'i erkek olmak üzere toplam 280 kişi ile birebir anket uygulanmıştır. Toplamda 87 bitki hakkında bilgi derlenmiştir. Bunların 9 tanesi kültür bitkisidir. Bitkiler çok çeşitli rahatsızlıklar için kullanılsa da özellikle deri hastalıkları, solunum yolu hastalıkları, mide rahatsızlıkları, yaralar, dini inançlar, besi hayvanlarının sağlığı ile süt ve yağ verimini artırmak amaçlı kullanımlar ilk sıralarda yer almaktadır. Ayrıca bu çalışma ile *Calvatia utriformis, Trifolium canescens, Castanea sativa, Fagus orientalis, Cyclamen coum* var. *caucasicum, Alnus glutinosa* subsp. *barbata, Colchicum speciosum, Phedimus stoloniferus, Picea orientalis* gibi bitki taksonlarına ait farklı kullanım alanları da tespit edilmiştir.

Anahtar kelimeler: Geleneksel kullanım, Tıbbi ve aromatik bitki, Trabzon, Türkiye

Introduction

The city of Trabzon was established at the starting point of the historical Silk Road, which passed through Erzurum to the border of Iran, connecting Europe and Asia. The establishment of the city dates back to 2000 BC. Historical records show that the city was founded by Mars, Tibarens and MosksTuranian tribes, who migrated to the region from Central Asia and Caucasia (URL1, 2013).

Trabzon city is located in the Eastern Black Sea region that is surrounded by Rize from the east, Gümüşhane and Bayburt from the south, Giresun from the west and Black Sea from the north. The study area is located between latitudes 40° 33' - 41° 07' N and longitude 39° 07' - 40° 30' E (Figure 1).

Trabzon city covers 4664 km^2. The total area is 22.4% plateau and 77.6% hills. The streams in the area are Değirmendere, Foldere, Karadere, Solaklı, Kalenima, Yanbolu, Küçükdere, and Manahos. Lakes in the city are Uzungöl and SeraLake (set landslide lakes), BalıklıLake, AygırLake, Karagöl, and glacial lakes of all sizes in Haldizen Mountains. Significant elevations of the region; Demirkapı (3376 m), Kayışkıran (3156 m), and Karakaya (3139 m) hills. Trabzon has a typical Black Sea climate, with rain the year around and temperatures reaching up to around 27°C in the summer. Winters are cool and damp, and the lowest temperature is around 5°C in January (URL2, 2013; URL3, 2013).

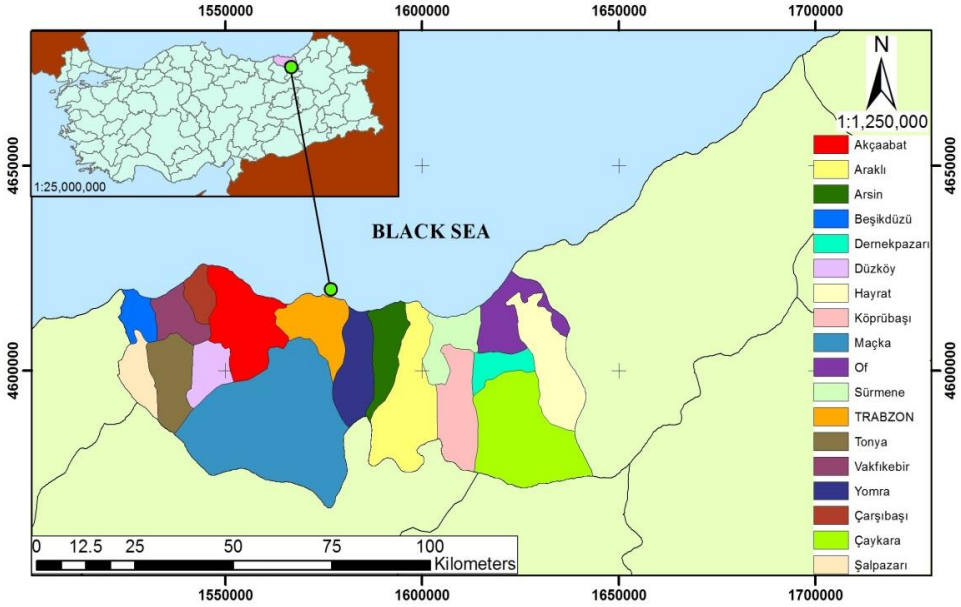

Figure 1. Provincial and district map of Trabzon region

Trabzon is located in the Colchic Sector of the Black Sea Section of the Euro-Siberian Flora Region. The city has a rich flora, as it contains various ecological units due to elevations ranging from sea level to 3376 m; the mountain ranges running parallel to the sea; its northern border with the Black Sea; large number of creeks; lakes of varying sizes; and the soil and climatic characteristics of the locality. There are six different vegetation structures in Trabzon: forest, humid creek, pseudo-macchie, wetland, alpine and dune vegetation (Mazlum et al., 2006). Species such as *Arbutus unedo, Cistus creticus, Laurocerasus officinalis, Corylus avellana, Olea europaea, Laurus nobilis, Juniperus oxycedrus,* and *Pinus pinea* are distributed in pseudo-maquis vegetation at elevations of 0–300 m, which is composed of a mixture of some Mediterranean plants scattered in small groups. Forest vegetation is one of the dominant vegetation types, starting from just above the pseudo-maquis vegetation and reaching an elevation of 2000 m. The most important trees in forest vegetation are *Picea orientalis* especially, *Fagus orientalis, Pinus sylvestris, Abies nordmanniana* subsp. *nordmanniana, Castanea sativa, Alnus glutinosa* subsp. *barbata, Quercus hartwissiana, Acer cappadocicum,* and *Tilia rubra* subsp. *caucasica*. Alpine vegetation is the second-largest vegetation type in the region, ranging from the upper forest limit to the highest mountain areas (1900–2000 m). Alpine vegetation generally includes rich herbaceous plant communities such as *Helichrysum graveolens, Trifolium polyphyllum, Geum coccineum, Alchemilla caucasica, Gentiana pyrenaica, Campanula tridentata,* and *Astragalus viciifolius,* and some ligneous plants such as *Juniperus communis, Vaccinium myrtillus, Rosa montana,* and *Rhododendron luteum* (Ansin, 1983).

The fact that Trabzon, which has a deep-rooted history, hosted various cultures increases its ethnobotanical significance. This study aimed to identify the ethnobotanical characteristics of the region in order to determine the implications of cultural diversity in the region on plant–human relationships.

Materials and Methods

Study material consisted of the plants collected from Trabzon city center, and districts; and some villages and plateaus during June 2011–September 2012. These plants have been used by local people for various purposes. During the study, Yomra, Arsin, Araklı, Sürmene, Of, Çaykara, Akçaabat, Tonya, Vakfıkebir, Beşikdüzü, Düzköy, Maçka, Çarşıbaşı, Köprübaşı districts and certain villages and plateaus of

these districts (Hıdırnebi, Haçka, Uzungöl, Hamsiköy, Sultanmurat, Ağaçbaşı, Kadırga) were visited and plant specimens were collected at different vegetation periods. Information on the uses of these plants was obtained by face-to-face interviews with local people and was recorded using a questionnaire form. The questionnaire contained demographic information of such as age, gender, marital status, educational level, job, social security and income level. In addition, the intended uses (medication, food, spice, animal food, religious belief, etc.), methods of use and—if any—local names of the plants were recorded. Each plant used by local people was photographed.

Information was obtained from local people about the plants, with the exception of those that are common and widely known in the region such as *Laurocerasus officinalis, Zea mays, Juglans regia, Laurus nobilis* and *Ficus carica*. Study participants were asked to show live specimens of these plants in situ. Photographs were used in periods during which plants were not present in nature due to vegetation season. The usage, used parts, and local names of plants were recorded, and samples were then pressed and dried for identification. To permit complete and accurate identification of collected plant specimens, we ensured that the plants had generative and vegetative organs such as fruits, flowers, leaves (bottom leaves in herbaceous plants), bud, tuber, rhizome and corm. Information about collection location, collection date, elevation and habitat of each dried plant specimen was recorded and written on a tag prepared for herbarium registration.

For the identification of the plant specimens were used as a main source "Flora of Turkey and the East Aegean Islands" (Davis, 1965-1985; Davis et al., 1988, Guner et al., 2000; Güner, 2012). "Flora of Trabzon-Meryemana Research Forest and Floristic Research Pure Oriental Spruce Stands" (Ansin, 1979), "Vascular Flora of Forest Vegetation in Altındere Valley (Maçka-Trabzon)" (Uzun and Terzioglu, 2008), "Subalpin and Alpine Flora of Altindere Valley (Macka-Trabzon)" (Palabas and Ansin, 2006), plant atlases with illustrations and photographs (Bonnier, 1912-1934; Fitter et al., 2000; Phillips, 1994; Clapham et al., 1965; Hegi et al.,1977; Lanzara and Pizzetti, 1978, Wright, 1992 Godet, 1991, Polunin, 1969; Polunin, 1991), The Lichen Flora of Great Britain and Ireland (Purvis et al., 1994) were also used. Additionally, plant specimens were compared to herbarium specimens in KATO (Herbarium of the Faculty of Forestry, Karadeniz Technical University).

Results and Discussion

A total of 280 people were contacted for the questionnaire study and data was compiled for 87 plants. The average age of participants is 56.

Demographic information of people was shown in Table 1.

Table 1. Demographic features of people

Features	Number of people	Percentage (%)
Gender		
Male	162	58
Female	118	42
Marital status		
Single	17	6
Married	263	94
Educational level		
Uneducated	22	8
Primary school	158	56
Secondary school	39	14
High school	39	14
University	22	8
Age Groups		
21-40	45	16
41-60	134	48
61-80	87	31
>80	14	5
Social security		
Available	50	18
Unavailable	230	82
Income level**(TL)**		
0-500	115	41
501-1000	95	34
1001-1500	39	14
>1500	31	11
Jobs		
Officer	24	9
Worker	15	5
Farmer	33	12
Student	3	1
Retired	48	17
Housewife	134	48
Self-employment	9	3
Artisan	7	3
Unemployed	7	3

Specimens were collected from these plants and photographed. Of the 87 plants identified in the study, two belonged to division *Mycophyta* (*Calvatia utriformis, Peltigera polydactyla*), one belonged to division *Pteridophyta* (*Pteridium aquilinum*) and 84 belonged to division *Spermatophyta*. The 83 s*permatophytes* belonged to sub-division *Angiospermae*; and one plant belonged to sub-division *Gymnospermae*. The families which contained the most taxa were *Rosaceae* (8 taxa), *Liliaceae* (6 taxa), *Asteraceae* (5 taxa) and *Ericaceae* (5 taxa) (Table 2).

We attempted to collect specimens of all plants; however this was not possible because some were culture plants: they were introduced to the region from other places; or they were cultivated in the past but are not cultivated today. For example, garlic (*Allium sativum*) is an introduced species, but has long been used for health purposes and as food.

The study identified 9 were culture plants: *Camellia sinensis, Anethum graveolens, Petroselinum crispum, Phaseolus vulgaris,Allium cepa, Allium sativum, Zea mays*, and *Cydonia oblonga*, *Solanum tuberosum*.

It was found that the plants were mostly used to treat skin, respiratory, and stomach conditions, diabetes, wounds and cuts. In addition to usage as food, some plants were used for animal health; to increase milk and fat yield; for certain religious beliefs; and for local tool-making. The plants were used for 83 different purposes by local people. Scientific and local names, used parts, and intended uses of the plants are summarized in Table 2.

It was found that different plants had the same local names and were used for the same purposes, due to their similar characteristics. For example, some plants of the *Lamiaceae* family (*Thymus* sp., *Origanum* sp., *Satureja* sp.,) were called "thyme, mountain tea" and were generally used for stomach and respiratory tract diseases.

Genera *Taraxacum, Rubus, Alchemilla, Rosa, Thymus* were found to have more than one taxa in the locality. Since all taxa belonging to the genera were used for the same purposes, they were not individually explained on the basis of species, but only general characteristics of the genera were explained.

Plants of the *Asteraceae* family are used by local people to increase milk and fat yield of animals, and were given similar local names such as "*Sütlüce, Sütlü Ot, Sütliga*" in Turkish.

Table 2. Traditional uses of plants of Trabzon, Turkey

Family	Botanic name	Local names	Part used	Facture	Traditional uses
Adoxaceae	*Sambucus ebulus* L.	Levor, Livor, Yiğidin	L, Fr	Fresh, Dec.	Skin diseases, insect-fly-woodworm repeller
Adoxaceae	*Sambucus nigra* L.	Goğuskula	W	Dried wood	End-blown flute
Amaryllidaceae	*Allium cepa* L.[c]	Soğan	B, Tr	Ointment, Dec., Fresh, Cooking	Whitlow and weep, gynaecological diseases, food
Amaryllidaceae	*Allium sativum* L.[c]	Sarımsak	B	Crushed, Fresh	Froncle, chlorothiazide, beard-hair loss
Apiaceae	*Anethum graveolens* L.[c]	-	L	Dec.	Cholesterol lowering
Apiaceae	*Heracleumplatytaenium* Boiss.	Ezerte, Halvan, Keklik	Ls, Tr	Fresh	Food
Apiaceae	*Petroselinum crispum*(Mill.) A.W.Hill[c]	Maydanoz	L	Dec., Fresh	Cholesterol lowering, halitosis, food

Table 2. Continue

Araceae	*Arum italicum* Mill.	Domuz Lahanası, Danaayağı	T	Cooking, Boiled	Food, eczema, hemorrhoids
Asteraceae	*Anthemis cotula* L.	Papatya	F	Inf., Dec.	Kidney disease, prunella, stomach diseases, tranquiliser, chlorothiazide
Asteraceae	*Bellis perennis* L.	Papatya	F	Inf., Dec.	Respiratory, tranquiliser, gynaecological diseases
Asteraceae	*Cicerbita alpina* (L.) Wallr.	Sütliga	Pp	Fresh	Fodder to increase milk
Asteraceae	*Taraxacum* Zinn.	Sütlü Ot	Pp, L, P	Fresh, Inf., Drying	Food, cardiovascular, diabetes, fodder to increase milk
Asteraceae	*Impatiens noli-tangere* L.	Kınaotu	L	Crushed	Henna, skin diseases
Betulaceae	*Alnus glutinosa* (L.) Gaertn.subsp. *barbata* (C.A.Mey.) Regel	Kızılağaç	L, Br, S	Fresh	Skin disease, skin rubbing, wicker basket
Betulaceae	*Corylus avellana* L.	Fındık	W, Br, S, L	Fresh, Dec., Charcoal	Wicker basket, wicker chair, charcoal, constipation
Boraginaceae	*Echium vulgare* L.	Lavhata	Pp	Cooking	Food
Boraginaceae	*Trachystemon orientalis* (L.) G.Don	Galdirik, Godan, Somara, Tobara	L, Ro	Cooking	Food
Brassicaceae	*Capsella bursa-pastoris* (L.) Medik.	Kuşotu, Kuş Pancarı	S	Cooking, Dec.	Food, diabetes
Brassicaceae	*Cardamine raphanifolia* Pourr.subsp. *acris* (Griseb.) O.E.Schulz	Mayasıl Otu	S, L, Se	Fresh, Boiled	Hemorrhoids
Brassicaceae	*Nasturtium officinale* R.Br.	Surokası, Sumak	S	Fresh	Diabetes
Caryophyllaceae	*Stellaria media* (L.) Vill. subsp. *media* (L.) Vill.	Yavşu	Pp	Fresh, Cooking	Food
Chenopodiaceae	*Chenopodium album* L. subsp. *album* L. var. *album* L.	Evlita, Tel Pancarı	L	Cooking	Food
Cornaceae	*Cornus mas* L.	Ergen	Fr, L	Dec., Fresh, Crushed	Diabetes, insomnia, laxative, wound healing
Cornaceae	*Cornus sanguinea* L. subsp. *australis* (C.A. Meyer) Jav.	-	Fr	Fresh	Skin diseases
Crassulaceae	*Phedimus stoloniferus* (S.G.Gmel.) 't Hart	Maya Otu	L	Crushed	Yogurt and cheese leaven
Ebenaceae	*Diospyros lotus* L.	Küçük Meyveli Trabzon Hurması	Fr	Cooking	Molasses

Table 2. Continue

Equisetaceae	*Equisetum arvense* L.	Dorukotu, Sazotu, Kırkkilit Otu	Br	Dec., Mix Inf.	Hemorrhoids, kidney stone
Ericaceae	*Erica arborea* L.	Süpürge Otu, Süpürge Çiçeği	Br, S	Dried	Make a broom
Ericaceae	*Rhododendron luteum*	Zifin	F	Food	Bee culture, chlorothiazide
Ericaceae	*Rhododendronponticum* L.	Komar, Ağu	F, L, W	Food, Fresh, Dried wood	Bee culture, skin rubbing, make a mixer
Ericaceae	*Vaccinium arctostaphylos* L.	Trabzon çayı, Likapa, Lifar	Br, L, Fr	Dried, Inf. Fresh	Make a broom, kidney diseases, food
Ericaceae	*Vaccinium myrtillus* L.	Çalı Çileği	Fr	Fresh, Dried	Food
Euphorbiaceae	*Mercurialis annua* L.	Barten, Parten	L	Inf.	Infertility
Fabaceae	*Phaseolus vulgaris* L.[c]	Fasulye	Fr, Se	Paste (with wood cinder), Cooking	Pelade, wound healing, food
Fabaceae	*Trifolium pratense* L. var. *pratense* Boiss. Et Bal.	Yonca Otu, Çayırotu	F	Inf.	Stomach diseases, antitussive
Fabaceae	*Trifolium canescens* Willd.	Yonca Otu, Çayırotu	F	Cooking	Food (marmalade)
Fabaceae	*Vicia sativa* L.subsp. *nigra* (L.) Ehrh. var. *segetalis* (Thuill.) Ser. Ex DC.	-	Pa, L	Cooking, Fresh	Food, fodder to increase milk
Fagaceae	*Castanea sativa* Miller	Kestane	W, Br, S, F	Wood flour, Dried wood, Food	Make a local materials, skin rubbing, bee culture
Fagaceae	*Fagus orientalis* Lipsky	Gürgen	W	Wood flour, Dried wood	Make a local materals, skin rubbing
Grossulariaceae	*Ribes alpinum* L.	-	Fr	Fresh, Cooking	Food
Hypericaceae	*Hypericum androsaemum* L.	Mayasıl Otu	L, F	Fresh, Inf.	Exteriorly wound healing, hemorrhoids
Hypericaceae	*Hypericumperforatum* L.	Sarı Kantaron	Pp	Inf., Medical oil	Tranquiliser, antipyrotic, wound healing
Hypolepidaceae	*Pteridium aquilinum* (L.) Kuhn	-	L	Dried	Incense, stables to use
Juglandaceae	*Juglans regia* L.	Ceviz	L, Se	Fresh, Maceration	Mice against in stables, cholesterol lowering, hair dye
Lamiaceae	*Mentha longifolia* (L.) L.	-	L	Dec.	Stomach diseases
Lamiaceae	*Thymus* L.	Anuk, Dağ Çayı	L, F	Inf.	Stomach diseases, bronchial
Lauraceae	*Laurus nobilis* L.	Defne	L, S, Se	Dec., Dried, Powder	Liver and intestinal diseases, rheumatism pains, dyspnoea, spice

Table 2. Continue

Liliaceae	*Colchicum speciosum* Steven	Vargit, Kalkgit, Çumak, Zumak, İt keseri	Se	Crushed	Rheumatism pains, wounds of small cattles
Liliaceae	*Ornithogalum oligophyllum* E.D.Clarke	Yoğurt Maya Çiçeği	B, L, F	Cooking, Crushed	Food, yogurt leaven
Liliaceae	*Smilax excelsa* L.	Zimilang Dikeni, Zibilanke, Melevcen, Gıcır Otu	Fr, S, Br	Inf., Fresh, Cooking	Rheumatism pains, gastric ulcer, eczema
Liliaceae	*Veratrum album* L.	Sumah	L	Cooking	Food
Loranthaceae	*Viscum album* L.	Tutkal	Fr	Fresh	Atherosclerosis, bronchial, asthma
Lycoperdaceae	*Calvatia utriformis* (Bull. ex Pers.) Jaap	-	Sp	Powder	Running wounds
Lycopodiaceae	*Lycopodium clavatum* L.	Kurtayağı, Rufiye, Urum İpi	Pp	Dec., Dried	To make rope, carminative infants
Malvaceae	*Malva sylvestris* L.	Moloşa	L, F	Inf.	Stomach and intestinal diseases, anticancer drug
Moraceae	*Ficus carica* L. subsp. *carica*	İncir	Fr, La	Fresh, Cooking	Scorpion sting, food, laxative
Papaveraceae	*Chelidonium majus* L.	Temre	La	Fresh crushed	Skin diseases
Peltigeraceae	*Peltigera polydactyla* (Neck.) Hoffm.	Yerotu	L	Dec.	Laxative
Pinaceae	*Picea orientalis* (L.) Link	Doruk Ağacı, Çam	Re, W	Astringent, Dec.	Skin diseases, wound and scotch, diabetes, gastric ulcer, intestinal disorder, kindling
Plantaginaceae	*Plantago lanceolata* L.	Kılıç Otu, Öküz Dili, Kesikotu	L	Crushed	Scotchs
Plantaginaceae	*Plantago major* L. subsp. *major*	Sinirli Ot	L, Se	Inf., Fresh, Dec.	Coronary diseases, inflammation, stomach diseases, hemorrhoids, intestinal disorder, sinusitis
Poaceae	*Cynodon dactylon* (L.) Pers. var. *villosus* Regel	Sabankıran	Ro	Dec.	Gonorrhoea
Poaceae	*Zea mays* L.[c]	Mısır	Fr, L, St	Dec., Dried, Boiled	Urinary tract disorders, gonorrhoea, food, fodder, instead of cigarette tobacco
Polygonaceae	*Polygonum bistorta* L. subsp. *carneum* (Koch) Coode & Cullen	Karalahana	L	Cooking	Food
Polygonaceae	*Rumex acetosella* L.	Ekşice, Efelik, Ekşi Pancar	L	Cooking, Inf., Fresh	Food, stomach diseases, diabetes, cholesterol lowering, fodder

Table 2. Continue

Polygonaceae	*Rumex alpinus L.*	Lapaza	L	Dec., Fresh	Hemorrhoids, against the skin redness by *Urtica dioica*
Primulaceae	*Cyclamen coum* Mill. var. *caucasicum* (C.Koch)	Domuz ağırşağı	T	Inf., Crushed	Against the worms in cropland, soap
Primulaceae	*Primula acaulis* (L.) L.	Zimbon Otu, Menekşe	F, L	Crushed, Fresh	Rheumatism pains, food
Ranunculaceae	*Ranunculus constantinopolitanus* (DC.) d'Urv.	-	F, Ro	Crushed, Inf.	Rheumatism pains, hemorrhoids
Rhamnaceae	*Frangula alnus* Mill. subsp. *alnus*	Zigar Otu, Ciğar	L	Fresh	Fodder to increase milk
Rosaceae	*Alchemilla* L.	Kurtayağı, Dokuztepe, Paraotu, Fındıkotu, Sarıçiçek	F, L	Dec., Inf., Fresh	Diabetes, kidney, intestinal, and stomach diseases, wound healing, fodder to increase milk and butter
Rosaceae	*Cerasus avium* (L.) Moench	Kiraz	Frs, Br	Dec.	Urinary tract disorders, relieve diarrhea for animal
Rosaceae	*Cydonia oblonga* Mill.[c]	Ayva	L, Br	Inf., Dec.	Common cold, cough, diarrhea, digestive
Rosaceae	*Fragaria vesca* L.	Amofta, Hanifta	Fr	Fresh, Cooking	Food
Rosaceae	*Laurocerasus officinalis* M.Roem.	Laz Kirazı	Fr, L, Se, W	Fresh (with honey), Dec., Wet wood, Cooking	Fracture and pain, cracks in the skin, expectorant, food, diabetes, ingrown nails and iron
Rosaceae	*Rosa* L.	Kuşburnu	Fr, Ro	Cookimg, Inf., Dec.	Food, tinea pedis, prostate cancer
Rosaceae	*Rubus idaeus* L.	Ahududu	Fr	Fresh, Cooking	Food, haematinic
Rosaceae	*Rubus* L.	Avat, Moloşa, Mora	Fr, L, Ro, S	Fresh, Cooking, Dec., Inf.	Food, diarrhea, fracture, fodder to increase butter, hemororit, bronchial, haematinic, diabetes
Salicaceae	*Salix alba* L.	Söğüt	L	Fresh	Cracks in the skin
Sapindaceae	*Aesculus hippocastanum* L.	Sancı kestanesi	Fr	Powder	Pain reliever for animal
Solanaceae	*Atropa belladonna* L.	Gözotu	L	Dec.	Against the eye worm
Solanaceae	*Physalis alkekengi* L.	Yabani Biber	Fr	Fresh	Food, diuretic
Solanaceae	*Solanum tuberosum* L.[c]	Patates	T	Sliced	Headache
Theaceae	*Camellia sinensis* (L.) Kuntze[c]	Çay	L	Processed and crushed	Diarrhea
Tiliaceae	*Tilia platyphyllos* Scop.	Ihlamur	L, F	Inf.	Malaria, common cold

Table 2. Continue

Urticaceae	*Urtica dioica* L.	Sırgan	L, Se	Inf., Boiled, Cooking, Dec.	Skin diseases, measles, allergic diseases, rheumatism and low back pain, stomach diseases, anticancer, food
Valerianaceae	*Valeriana alliariifolia* Adams	-	Ro	Dec.	To protect the livestock from parasites and louses

Abbreviations: B: Bulb, Ba: Bark, Br: Branch, F: Flower, Fr: Fruit, Frs: Fruit Stalk, L: Leaf, La: Latex, Ls: Leafstalk, P: Pedicel, Pa: All plant, Pp: The aerial parts of plant, Re: Resin, Ro: Root, S: Shoot, Se: Seed, Sp: Spore, St: Stylus, T: Tuberous, Tr: Trunk, W: Wood, Dec.: Decoction, Inf.: Infusion, c: Cultivated plant.

Although all plants had Turkish names in the literature, we were unable to establish local names for 9 of the plants. It was found that 13 plants were only used as food and 17 different taxa were consumed in various ways such as fresh, boiled, cooked, as jam and molasses to cure diseases. We found that 13 plant species were used as animal food and for animal health. One plant was used as incense, and 7 different taxa were used to make local tools.

The plants were mostly used by decoction and infusion. The most commonly used vegetative or generative organs were the leaves, fruits, flowers and shoots, respectively. Other plant parts used by local people included resin, tuber, corm, leaf stalk, stem, flower stalk, branch, wood, root, seed, shell, spores, latex, stylus and fruit stalk. There are similar used organs outside Turkey. According to Tahri et al. (2012), the most commonly used organs were the leaves, fruits, root and aerial parts of plant, respectively.

Yazicioglu and Tuzlaci (1996) studied plants used as folk remedies in the region, and reported that 67 plant taxa, 25 of which were culture plants, were used for health purposes. Similar to the present study, that study found that species used for health purposes were mostly used to treat bronchitis, rheumatism, hemorrhoids, diabetes, stomach diseases, wounds, eczema and allergic diseases.

The taxa most commonly used by local people for medicinal or other purposes were *Sambucus ebulus*, *Urtica dioica*, *Plantago major* subsp. *major*, *Laurocerasus officinalis*, *Picea orientalis*, *Corylus avellana*, *Rubus* spp. and *Zea mays*.

However, some plants used in the Trabzon locality for health purposes and as food are potentially poisonous, and so should be used with caution: *Arum italicum*, *Chelidonium majus*, *Equisetum arvense*, *Hypericum perforatum*, *Physalis alkekengi*, *Rhododendron ponticum* subsp. *ponticum*, *Sambucus ebulus*, *Sambucus nigra* and *Viscum album* (Baytop et al., 1989).

Some woody species in the region are used to make tools. Branches and shoots of *Alnus glutinosa* subsp. *barbata* and *Corylus avellana* are used to make baskets known locally as "*Şelek*". The branches of *Vaccinium arctostaphylos* are used to make brooms; the wood of *Castanea sativa* is used to make a 50 cm measurement cup called "*Kot*" to weigh products such as hazelnut and corn. In addition, the wood of *Rhododendronponticum* subsp. *ponticum* var. *ponticum* is used to make a type of large mixer, known as "*Mikser"* by local people. The wood of *Fagus orientalis* was generally used to make axe- and shovel handles.

This study was compared with similar traditional and medicinal plant studies carried out in different regions of Turkey (Sezik et al., 1997; Yesilada et al., 1999; Tuzlaci and Erol, 1999; Tuzlaci and Tolon, 2000; Elci and Erik, 2006; Ezer and Mumcu-Arisan, 2006; Fakir et al., 2009; Dogru-Koca and Yildirimli, 2010; Ozgen et al.,2012; Sagiroglu et al., 2012; Kizilarslan and Sevgi, 2013; Toksoy and Bayramoglu, 2010). In the present study, *Calvatia utriformis* mushroom was used to treat draining wounds; flowers of *Trifolium canescens* were used to make jam;

the powdered wood of *Castanea sativa* and *Fagus orientalis* was used to treat diaper rash; tubers of *Cyclamen coum* var. *caucasicum* were used as soap, particularly for oily stains; the leaves of *Salix alba* were used to treat skin cracks; fresh leaves of *Alnus glutinosa* subsp. *barbata* were used to treat fungi and itching between the fingers and toes; the seeds of *Colchicum speciosum* were used to treat wounds, especially in feet and tails of sheep; the leaves of *Phedimus stoloniferus* were used to ferment yoghurt; kindling wood obtained from *Picea orientalis* was used to treat intestinal ulcer and enteritis. Different uses of these plants were identified for the first time in this study.

The following are examples of drug mixtures prepared by local people to treat various diseases.

Mixture 1: A solution made from garlic, honey, vinegar and raki yeast is applied to the heads of children to cure jaundice. The child's head is then wrapped with *Rhododendron ponticum* leaves and kept for 24 hours. The same solution is also applied under the tongue and on the small razor-cuts on the tongue.

Mixture 2: A mixture comprising 20 lemons, 0.5 kg of garlic and 2 glasses of stinging nettle water is used to treat expanded coronary arteries. The mixture is drunk on an empty stomach in the morning.

Mixture 3: Juice of a lemon, a spoon of honey and a small spoon of mint leaves (dried or fresh) are mixed into a glass of hot water to treat common cold.

Mixture 4: Decoction of corn silk and *Cynodon dactylon* root is drunk to treat gonorrhea.

Mixture 5: White beans are grilled on fire and crushed with wood ash to obtain a paste. The paste is used to treat alopecia and draining wounds on the head.

Mixture 6: Decoction of *Plantago major*, mint and garlic is used to treat skin wounds. The obtained liquid pomade is externally applied to the wound area.

Mixture 7: Ground pumpkin seed is mixed with honey and yoghurt to treat prostate and pinworms.

Mixture 8: Decoction comprising a pinch of dried corn silk, linden, sage and chamomile is used to treat kidney and coronary diseases.

Mixture 9: Pomade made by stewing spruce resin, butter and radix alcannae is applied externally to burn wounds.

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