



### Ethnobotanical aspects of Kapıdağ Peninsula (Turkey)

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#### Abstract

The Kapıdağ Peninsula lying in the northwest of Marmara Region of Turkey and with an area of 300 km<sup>2</sup> is situated in the province of Balıkesir. An ethnobotanical survey was undertaken during 2004–2006. 119 people from 7 villages in Kapıdağ Peninsula were interviewed in this study. Being evaluated, the information obtained about the use of plants was classified as medicinal (44 taxa belonging to 33 families), food (40 taxa belonging to 21 families), dye (4 taxa belonging to 4 families), fuel (4 taxa belonging to 4 families), ornamental (5 taxa belonging to 5 families) and other purposes (12 taxa belonging to 11 families). In all 88 taxa belonging to total 47 plant families were evaluated ethnobotanically.

**Key words:** Balıkesir, Ethnobotany, Kapıdağ Peninsula, Turkey

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### Kapıdağ yarımadası'nın (Türkiye) etnobotanik özellikleri

#### Özet

Türkiye'nin Kuzeybatı Marmara Bölgesi'nde yer alan ve 300 km<sup>2</sup> yüzölçümü olan Kapıdağ Yarımadası, Balıkesir ili sınırları içerisindedir. Bu yarımada 2004–2006 yılları arasında etnobotanik bir çalışma yapıldı. Bu çalışmada, yarımada 7 köye ait 119 kaynak kişi ile görüşülmüştür. Bitkilerin kullanımı ile ilgili olarak elde edilen bilgiler değerlendirildiğinde, tıbbi (33 familyaya ait 44 takson), gıda 21 familyaya ait 40 takson), boya (4 familyaya ait 4 takson), yakıt (4 familyaya ait 4 takson), süs (5 familyaya ait 5 takson) ve diğer kullanım amaçları (11 familyaya ait 12 takson) olarak sınıflandırılmıştır. Sonuçta, toplam olarak 47 familyaya ait 88 takson etnobotanik özellikleri açısından değerlendirilmiştir.

**Anahtar kelimeler :** Balıkesir, Etnobotanik, Kapıdağ Yarımadası, Türkiye

#### 1. Introduction

The study of traditional uses of plants and their products in the world in general and in the Mediterranean region in particular has been progressively increasing during the past few decades (Rivera et al., 2005; De Natale and Pollio, 2007). The medicinal plants are widely used these days in most developing countries for the maintenance of health (UNESCO, 1996). In Europe, more than 1500 species of aromatic plants are used in Albania, Bulgaria, Croatia, France, Germany, Hungary, Poland, Spain, Turkey, and the United Kingdom (Hoareau and Da Silva, 1999). An increasing reliance on the use of traditional medicines in the industrialised societies is being observed (UNESCO, 1998). The wild plant foods have a key nutritive role in the cuisines of rural populations all over the world. Due to the renewed interest in ethnobotany especially over the past decade, it has become important that we establish a proper knowledge base of these plants, bringing together information on their ecology, habitat and distribution.

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Interest in the field of ethnobotany in Turkey is also increasing and a lot of work is being carried out. Several papers have been published by different investigators notable ones among them are Öztürk and Özçelik (1991), Sezik et al. (1991, 1997), Yeşilada et al. (1993), Fujita et al. (1995), Honda et al. (1996), Alpınar and Saçlı (1997), Tuzlacı and Erol (1999), Alpınar (1999), Tuzlacı and Tolon (2000), Ertuğ (2000), Tuzlacı and Aymaz (2001), Özgen et al. (2005), Doğan et al. (2005), Özgökçe and Özçelik (2005), Everest and Öztürk (2005), and Cansaran and Kaya (2010).

Our aim here was to collect information about the traditional uses of plants from Kapıdağ peninsula. The peninsula is located at the intersection of three major phytogeographical regions of Turkey, Mediterranean, Irano-Turanian and Euro-Siberian. Although the peninsula has attracted the attention of several ecologists because the elements from all three phytogeographical regions grow in harmony in the peninsula, no information was available on the ethnobotanical aspects. The existence of world famous “Gzikos and Belkis” ruins, summer touristic centres and agricultural practices are the three main factors that influence the natural plant cover of the peninsula (Oflas and Öztürk, 1987). The area has also experienced huge migrations of different Turkish tribes during its history (Yakupoğlu, 2001, 2004). This prompted us to undertake this study before the information is completely lost.

### *Study Area*

The triangular shaped Kapıdağ peninsula with an area of over 300 km<sup>2</sup> lies in the north of Balıkesir province, between 27° 30' W - 28° 15' E longitude and 41° 15' N - 41° 43' S latitude flanked on the north by Marmara Island, in the south by Bandırma, in the east by Fener Island, Bay of Marmara and in the west by Edincik and Erdek Bay (Figure 1). It includes important centres like Erdek, Tatlısu, Şahinburgaz, Ocaklar, İlhanıköy, Turanköy, Ormanlı, Cayağzı, and Karşıyaka.

The altitude varies between 10-782 m and climate is semi-humid mild type (Akman and Daget, 1971). The mean annual temperature is 12.4°C and means annual precipitation 694.4 mm (Oflas and Öztürk, 1987). The area abounds in vineyards, fruit orchards and olive plantations. The highest parts are surrounded by forest.

The Mediterranean elements generally dominate the area from 0-300 m, mixed deciduous plants together with some maquis elements from 300-600 m and deciduous and evergreen trees from 600-1000 m. The tree species which one commonly comes across in the area are; Turkish pine (*Pinus brutia*) and black pine (*P. nigra* subsp. *caramanica*). The species of elm (*Ulmus*), hornbeam (*Carpinus*), beech (*Fagus*), oak (*Quercus*) and alder (*Alnus*) are also found to grow among these pines. *P. brutia* however, starts appearing at 100-200 m and goes up to an altitude of 400-500 m, whereas its upper limits exist around 1200 m in Taurus range. Its limitation to lower altitudes in the peninsula could be attributed to the climatic interference from north Anatolia. *P. nigra* subsp. *caramanica* appears at 500-600 m in this area but around 1200-1300 m in Taurus range. The major part of the peninsula is covered by the typical maquis elements such as, kermes oak (*Quercus coccifera*), mastic (*Pistacia lentiscus*), terebinth (*P. terebinthus*), laurel (*Laurus nobilis*), mock privet (*Phillyrea latifolia*), asparagus (*Asparagus acutifolius*), olive (*Olea europaea*), prickly juniper (*Juniperus oxycedrus*), Spanish broom (*Spartium junceum*), myrtle (*Myrtus communis*) and the species of Christ's-thorn (*Paliurus*), sumac (*Rhus*), rockrose (*Cistus*) and arbutus (*Arbutus*). The typical species of black sea region such as common hazel (*Corylus avellana*), heather (*Calluna vulgaris*) and firethorn (*Pyracantha coccinea*) also occur together with these species. The phryganic elements found in Kapıdağ are thorny burnet (*Sarcopoterium spinosum*), Cretan rockrose (*Cistus creticus*), sage-leaved rockrose (*C. salviifolius*) and topped lavender (*Lavandula stoechas*). Sycamore (*Platanus orientalis*), common hazel (*Corylus avellana*), oriental alder (*Alnus glutinosa*) and raspberry (*Rubus* sp.) dominate mainly the humid valleys. These are mixed up with the moisture loving Mediterranean elements. The north facing slopes of Kapıdağ are covered by a vigorous mixed forest of hornbeam (*Carpinus*), chestnut (*Castanea*) and oak (*Quercus*). Among these forests we also find the species of poplar (*Populus*), maple (*Acer*), linden tree (*Tilia*), cranberry (*Cornus*), rhododendron (*Rhododendron*) and bracken fern (*Pteridium*). The oaks occur either as pure or in the form of mixed stands (Oflas and Öztürk, 1987).

## **2. Materials and methods**

This investigation covered seven villages and Erdek district between 2004 and 2006 (Figure 1). Interviews were done with peasants, shepherds, elderly people of the village, experienced adults and people sitting in the tea houses, those working in the fields. In all seven villages on the basis of cultural differences were surveyed. Field investigations included surveys of local markets and interviews with villagers from seven villages. The ethnobotanical data was collected mainly in and around the rural areas, noting the species name, local names, parts used, applications, number of users and family prescriptions. Ethnobotanical uses of plants are given under their family names, in alphabetical order. In all 119 people were interviewed and 210 voucher specimens were collected. These were taxonomically identified with the help of 'Flora of Turkey and the East Aegean Islands' (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000) and deposited in the personal collection of the authors.

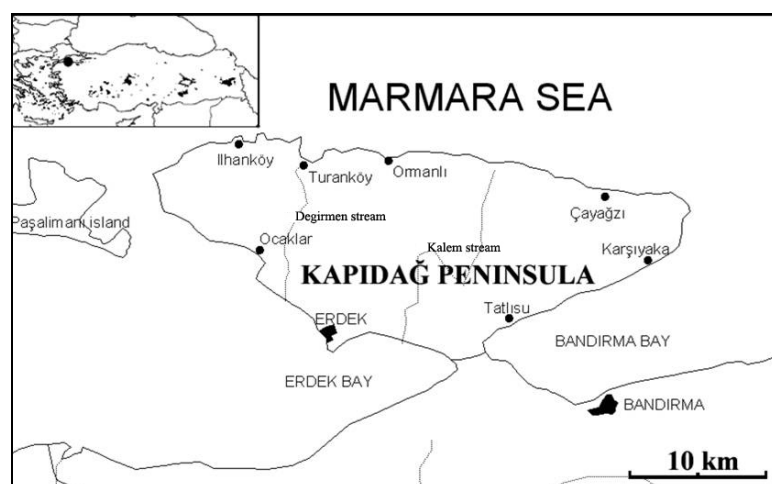


Figure 1. The map showing study area in Kapıdağ Peninsula-Turkey

### 3. Results

Although modern pharmaceuticals have taken the place of folk cures in many parts of the world, the phytotherapeutical use of wild herbs still has some importance in our survey area. Lately, the fear of losing their cultural heritage has prompted people in the region to start production of medicinal plants. In this study, special attention has been given to the plants that fall within this category (Şimşek et al., 2005).

Demographic features of the informants were evaluated according to the classification given by Erikson (1980). The age distribution was defined as early adult age for the persons whose age is below 20 years, middle adult means between 21- 30 years, late adult between 31-50 years, and old aged above 50 years.

According to the information collected from our informants from villages in the Kapıdağ Peninsula, some of the species were reported to have multipurpose uses such as; medicinal, food, fuel and dyes; others served miscellaneous purposes. Several plants are used for different diseases (Table 1). *Tilia rubra* subsp. *caucasica* (sore throat, cold, 97 users), *Leontice leontopetalum* subsp. *leontopetalum* (hemorrhoids, 79 users), *Tribulus terrestris* (against kidney stone, tension, 75 users), *Anthemis austriaca* (ovary diseases, cough, 75 users), *Centaurea iberica* (for kidney stones, 73 users), *Cucurbita moschata* (intestinal worm, diabetics and tension, 68 users), *Eryngium creticum* (anti-cough, kidney inflammation, 67 users) and *Teucrium polium* (stomach ailments, 67 users) are the typical examples used in the treatment of many ailments.

Table 1. The plants used for the medicinal purposes in the villages of Kapıdağ peninsula

Family and species names	Local Name	Part used	Application and number of use
<b>ANACARDIACEAE</b>			
<i>Pistacia terebinthus</i> L. subsp. <i>terebinthus</i>	Çitlembik	Leaves	Cancer, stomach aches, 32
<b>APIACEAE</b>			
<i>Eryngium creticum</i> Lam.	Diken	Stem	Anti-cough, kidney inflammation, 67
<b>ARACEAE</b>			
<i>Dranunculus vulgaris</i> Schott.	Yılan otu	Root, leaves	Cancer, rheumatic, 44
<b>ASPLENIACEAE</b>			
<i>Asplenium adiantum-nigrum</i> L.	Karabacak otu	Fronde	Sinusitis, tension regulator, 39
<b>ASTERACEAE</b>			
<i>Anthemis austriaca</i> Jacq.	Papatya	Flowers	Ovary diseases, cough, 75
<i>Artemisia absinthum</i> L.	Pelin otu	Leaves	Diabetes, 44
<i>Bellis perennis</i> L.	Nisan papatyası	Flowers	Sore throat, 58
<i>Centaurea iberica</i> Trev. ex Spreng.	Çakırdiken,	Aboveground	Dropping kidney stones, 73
<b>BERBERIDACEAE</b>			
<i>Leontice leontopetalum</i> L. subsp. <i>leontopetalum</i>	Patlangaç	Tuber	Hemorrhoids, 79
<b>BRASSICACEAE</b>			
<i>Nasturtium officinale</i> R.Br.	Germede	Aboveground	Dropping kidney stones, 43
<b>CAPRIFOLIACEAE</b>			
<i>Sambucus ebulus</i> L.	Sultan otu	Leaves	Hearth diseases, tension regulator ,29
<b>CISTACEAE</b>			
<i>Cistus creticus</i> L.	Pamuk otu	Stem	Diarrhoea, 23
<b>CLUSIACEAE</b>			
<i>Hypericum perforatum</i> L.	Kantaron, sarı kantaron	Stem	Stomach ailments, ulcer, 53
<b>CUCURBITACEAE</b>			
<i>Cucurbita moshata</i> (Lam.) Poir.	Bal Kabağı	Seeds	Intestinal worm, diabetics and tension, 68

Table 1 . (Continue)

<i>Ecballium elaterium</i> (L.) A. Rich.	Şeytan kelegi, düvelek	Fruits	Sinusitis, haemorrhoids, 46
<b>CUPRESSACEAE</b>			
<i>Juniperus oxycedrus</i> L. subsp. <i>oxycedrus</i>	Ardıç	Stems, leaves	Injure treatment, 35
<b>DIOSCOREACEAE</b>			
<i>Tamus communis</i> L. subsp. <i>cretica</i> (L.) Boiss.	Yılan otu	Root	Ache treatments, 45
<b>ELAEAGNACEAE</b>			
<i>Elaeagnus angustifolia</i> L.	İğde	Flowers	Kidney aches, 20
<b>EQUISETACEAE</b>			
<i>Equisetum ramosissimum</i> Desf.	Atkuyruğu	Aboveground	Rheumatism joints, 23
<b>FABACEAE</b>			
<i>Trifolium campsetre</i> L.	Kozalaklı tırfıl, tırfıl	Leaves	Acne treatment, 56
<b>GENTIANACEAE</b>			
<i>Centaureum pulchellum</i> (Swartz) Druce	Kırmızı kantaron	Stem	Injure treatments, 41
<b>LAMIACEAE</b>			
<i>Lavandula stoechas</i> L. <i>stoechas</i>	Karabaş otu	Aboveground	tension regulator , sinusitis, 39
<i>Melisa officinalis</i> L.	Melisa, oğulotu	Leaves, flowers	Cholesterol and tension, 86
<i>Origanum majorana</i> L.	Mercanköşk	Leaves, seeds	Stomach aches, atherosclerosis, 78
<i>Rosmarinus officinalis</i> L.	Biberiye	Leaves	Tension regulator, 76
<i>Salvia fruticosa</i> Mill.	Adaçayı	Aboveground	Antipyretic, sore throat, 92
<i>Teucrium polium</i> L.	Yavşan	Stem	Stomach ailments, 67
<b>LAURACEAE</b>			
<i>Laurus nobilis</i> L.	Defne	Seeds	Sinusitis and rheumatism, 64
<b>LILIACEAE</b>			
<i>Allium sativum</i> L.	Sarımsak	Whole plants	Intestinal worm treatment, tension, 91
<i>Asphodelus aestivus</i> Brot.	Çiriş, hıdrellez kamçısı	Root	Kidney stones, Eczema, 67
<b>MALVACEAE</b>			
<i>Malva sylvestris</i> L.	Ebegümeçi	Leaves	Kidney ailments, haemophilia, sore throat, 69
<b>MYRTACEAE</b>			
<i>Myrtus communis</i> L. subsp. <i>communis</i>	Mersin	Leaves	Diabetes, laxative, 55
<b>PLANTAGINACEAE</b>			
<i>Plantago lanceolata</i> L.	Sinirli ot, damarlı ot	Leaves, flowers	Injure and blain treatment, stomach aches, 39
<b>PLATANACEAE</b>			
<i>Platanus orientalis</i> L.	Çınar	Stem bark	Kidney stone dropping, 63
<b>POACEAE</b>			
<i>Cynodon dactylon</i> (L.) Pers. var. <i>dactylon</i>	Ayrık otu	Root	Kidney stone dropping, laxative, 54
<b>POLYGONACEAE</b>			
<i>Rumex tuberosus</i> L.	Kislek	Stem, leaves	Tension regulator, kidney stone dropping, 58
<b>PUNICACEAE</b>			
<i>Punica granatum</i> L.	Nar	Flowers	tension regulator , 44
<b>RANUNCULACEAE</b>			
<i>Ranunculus ficaria</i> L. subsp. <i>ficariiformis</i> Rouy.& Fouc.	Basur otu	Root	Hemaorrhoids and Eczema, 59
<b>ROSACEAE</b>			
<i>Mespilus germanica</i> L.	Döngel	Leaves, fruits	Diarrhoea, gastric, 50
<i>Pyrus elaeagnifolia</i> Pall.	Ahlat	Leaves, fruits	Diabetes, goitre
<b>SCROPHULARIACEAE</b>			
<i>Verbascum sinuatum</i> L. var. <i>sinuatum</i>	Çıldır	Aboveground	Stomach ache on babies, 30
<b>TILIACEAE</b>			
<i>Tilia rubra</i> DC. subsp. <i>caucasica</i> (Rubr.) V.Engler.	İhlamur	Leaves, flowers	Sore throat, cold, 97
<b>URTICACEAE</b>			
<i>Urtica dioica</i> L.	Isırgan	Aboveground	Eczema, diabetes, femine ailments, 89
<b>ZYGOPHYLLACEAE</b>			
<i>Tribulus terrestris</i> L.	Çoban çökeleği	Aboveground	Kidney stone dropping, tension, 75

Leaves of *Tilia rubra* subsp. *caucasica* are used to for sore throat and cold, so its leaves are boiled and their water is drunk. Tuber of *Leontice leontopetalum* subsp. *leontopetalum* is used for haemorrhoids, so its tubers are pulled out of the ground and sliced, then swallowed as a pill twice a day. Aboveground parts of *Tribulus terrestris* are used to expel kidney stones from body and to reduce tension, so if thorns of the plant are boiled and the water is drunk, kidney stone is thrown out of body and tension is regulated. Flowers of *Anthemis austriaca* are used for ovary diseases and cough. Boiled water is poured over the dried flowers of the plant and steeped like tea then its water is drunk.

Aboveground parts of *Centaurea iberica* are used to for kidney stones. Boiled water is poured over the dried aboveground parts of the plant and steeped like tea then its water is drunk. Seeds and fruit stalk of *Cucurbita moschata* is used for intestinal worm, diabetes and tension. The seeds of the plant are consumed as either roasted or non-roasted. Stalks of the fruit are peeled, boiled two hours and its water is drunk. Stem of *Eryngium creticum* is used for anti-cough

and kidney inflammation, so dried stems are boiled and its water is drunk. Stems of *Teucrium polium* are used to for stomach ailments, so stems of the dried plant are put into boiled water and steeped, then drunk every day.

A total of 40 taxa are used as food plants (Table 2). A classification of these according to the usage parts shows that in 14 taxa (35.0%) only fruits are consumed, aboveground parts in 9 taxa (22.5%), leaves in 8 taxa (20.0%), stems and leaves in 4 taxa (10.0%), inflorescences in 2 taxa (5.0%), root in 1 taxon (2.5 %), stem in 1 taxon (2.5%) and resin from 1 taxon (2.5%).

Table 2. The plants used as food in the villages of Kapıdağ Peninsula

Family and species names	Local Name	Part used	Application and number of use
<b>ANACARDIACEAE</b>			
<i>Pistacia terebinthus</i> L. subsp. <i>terebinthus</i>	Çitlembik	Fruits	Knick-knack, 32
<i>Rhus coriaria</i> L.	Sumak, Somak	Fruits	Spice
<b>APIACEAE</b>			
<i>Anethum graveolens</i> L.	Dereotu	Aboveground	Salad and meal, 74
<i>Foeniculum vulgare</i> Mill.	Tere, çakşır	Aboveground	Salad and meal, 30
<i>Oenanthe pimpinelloides</i> L.	Kazayağı	Stem, leaves	Salad and meal, 56
<i>Orlaya daucoides</i> (L.) Greuter.	Kazayağı	Leaves	Salad
<i>Petroselinum crispum</i> (Mill.) Nyman	Maydanoz	Leaves	Salad and meal., 96
<b>ASTERACEAE</b>			
<i>Cichorium inthybus</i> L.	Hindiba	Leaves	Salad and food, 23
<i>Hypochoeris radicata</i> L.	Sarı hindibağ	Leaves	Salad, 34
<i>Scolymus hispanicus</i> L.	Şevketi bostan, Kenger	Aboveground	Meal, 61
<b>BRASSICACEAE</b>			
<i>Raphanus raphanistrum</i> L.	Turp filizi	Stem, leaves	Salad and meal, 82
<i>Rapistrum rugosum</i> (L.) All.	Hardal	Root	Meal, 43
<i>Sinapis alba</i> L.	Hardal	Leaves	Salad and meal, 59
<b>BORAGINACEAE</b>			
<i>Trachystemon orientalis</i> (L.) G.Don.	Kaldırak	Leaves	Meal, 38
<b>CHENOPODIACEAE</b>			
<i>Chenopodium album</i> L.	Iştr	Aboveground	Meal, 59
<i>Salicornia europaea</i> L.	Deniz börülcesi	Stem, leaves	Meal, 34
<b>CONVOLVULACEAE</b>			
<i>Convolvulus arvensis</i> L.	Tarla sarmaşığı	Inflorescence	Eaten fresh, 25
<b>ELAEAGNACEAE</b>			
<i>Elaeagnus angustifolia</i> L.	İğde	Inflorescence	as tea, 26
<b>ERICACEAE</b>			
<i>Arbutus unedo</i> L.	Kumarika	Fruits	Jam, 45
<b>FAGACEAE</b>			
<i>Castanea sativa</i> Mill.	Kestane	Fruits	Boiled and knick-knack, 97
<b>JUGLANDACEAE</b>			
<i>Juglans regia</i> L.	Ceviz	Fruits	Eaten dry, 98
<b>LAMIACEAE</b>			
<i>Lamium purpureum</i> L. var. <i>purpureum</i>	Ballıbaba	Fruits	Nectar, 18
<i>Mentha piperita</i> L.	Nane	Leaves	as tea and eaten dry, 94
<b>MORACEAE</b>			
<i>Ficus carica</i> L. subsp. <i>carica</i>	İncir, yemiş	Fruits	as tea and eaten dry, 96
<i>Morus alba</i> L.	Akdut	Fruits	Jam, eaten fresh, 85
<b>ROSACEAE</b>			
<i>Prunus spinosa</i> L. subsp. <i>dasyphylla</i> (Shur) Domin.	Güvem	Fruits	Eaten fresh, 68
<i>Pyrus elaeagnifolia</i> Pall.	Ahlat	Fruits	Eaten fresh and pickle, 78
<i>Rubus canescens</i> DC.	Böğürtlen	Fruits	Eaten raw, 90
<i>Rubus sanctus</i> Schreb.	Kapini	Fruits	Meal and jam, 42
<b>OLEACEAE</b>			
<i>Olea europaea</i> L. subsp. <i>europaea</i>	Zeytin	Fruits	Salted, 99
<b>PAPAVERACEAE</b>			
<i>Papaver rhoeas</i> L.	Zalla	Leaves	Meal, 29
<b>PINACEAE</b>			
<i>Pinus brutia</i> Ten.	Çam	Resin	Gum, 47
<b>POLYGONACEAE</b>			
<i>Polygonum bellardii</i> All.	Madımak	Aboveground	Meal, 90
<i>Rumex conglomeratus</i> Murray.	Labada	Aboveground	Meal, 54
<i>Rumex patientia</i> L.	Labada	Aboveground	Eaten fresh and meal, 67
<i>Rumex tuberosus</i>	Kislek	Stem, leaves	Eaten fresh and meal, 74
<b>PORTULACACEAE</b>			
<i>Portulaca oleracea</i> L.	Semizotu	Stem	Salad and meal, 30
<b>PUNICACEAE</b>			
<i>Punica granatum</i> L.	Nar	Fruits	Eaten fresh as fruit, 84
<b>URTICACEAE</b>			
<i>Urtica dioica</i> L.	Isırgan	Aboveground	as tea, 53
<i>Urtica urens</i> L.	Isırgan	Aboveground	as tea, 44

In all 4 taxa are used as dye plants (Table 3) and two black dyes, 1 brown dye and 1 deep brown dye are extracted from these plants and evaluated in the dyeing of carpets. Stems of 4 plant species are used as fuel in this region (Table 3). These are *Arbutus unedo*, *Quercus infectoria*, *Olea europaea* subsp. *europaea* and *Pinus brutia*. Mostly *Arbutus unedo* and *Quercus infectoria* are used for this purpose. The species like Katurtınağı (*Spartium junceum*), Beyaz zambak (*Lilium candidum*), Gülfatma, gülhatmi (*Alcea pallida*), Kargı (*Arundo donax*) and Papur (*Typha angustifolia*) belonging to the families Fabaceae, Liliaceae, Malvaceae, Poaceae and Typhaceae respectively are used as ornamental plants. Out of these whole parts of 2 species, stems and flowers of one species and flowers of 2 species are used.

Table 3. The plants used for different purposes in the villages of Kapıdağ Peninsula

Family and species names	Local Use	Part used	Application and number of use
<b>ANACARDIACEAE</b>			
<i>Rhus coriaria</i> L.	Sumak, somak	Root, stem barks	It dyes black colour, 21
<b>CISTACEAE</b>			
<i>Cistus creticus</i> L.	Pamuk otu	Stem	Silk worming, 23
<b>ERICACEAE</b>			
<i>Arbutus unedo</i> L.	Kumarika	Stem	Wood fuel, 12
<i>Erica arborea</i> L.	Piren	Flowers and stem	Apiculture, home goods, silk worming, 13
<b>FABACEAE</b>			
<i>Trifolium hybridum</i> L.	Tirfil	Aboveground	Provender, 78
<i>Trifolium purpureum</i> Lois. var. <i>purpureum</i>	Tirfil	Aboveground	Provender, 54
<b>FAGACEAE</b>			
<i>Castanea sativa</i> Mill.	Kestane	Stem	Construction and furniture material, 17
<i>Quercus infectoria</i> Oliv.	Meşe, pırnal	Stem galls	It dyes brown colour, 17
		Stem	Wood fuel, charcoal, 32
<b>JUGLANDACEAE</b>			
<i>Juglans regia</i> L.	Ceviz	Leaves	It dyes deep brown colour, 34
		Stem, stem barks	Home goods, aesthetic, 23
<b>LAMIACEAE</b>			
<i>Melisa officinalis</i> L.	Oğulotu	Leaves, flowers, stem	Apiculture, 16
<b>LAURACEAE</b>			
<i>Laurus nobilis</i> L.	Defne	Leaves	Hair care, 19
<b>LILIACEAE</b>			
<i>Asphodelus aestivus</i> Brot.	Çiriş, Hidrellez kamçısı	Whole plant	Faith, 67
<b>MORACEAE</b>			
<i>Morus alba</i> L.	Akdut	Leaves	Silk worming, 18
<b>OLEACEAE</b>			
<i>Olea europaea</i> L. subsp. <i>europaea</i>	Zeytin	Stem	Wood fuel, 65
<b>PINACEAE</b>			
<i>Pinus brutia</i> Ten.	Çam	Stem	Wood fuel, 51
		Stem and resin	Goods, boat care, 11
<b>PLATANACEAE</b>			
<i>Platanus orientalis</i> L.	Çınar	Leaves	It dyes black colour, 26
<b>POACEAE</b>			
<i>Phragmites australis</i> (Cav.) Trin. ex Steudel.	Kamış	Stem	Construction material, fence making, 12

Although modern pharmaceuticals have taken the place of folk treatment in many parts of the world during the past decades, traditional systems of medicine have also become a topic of global interest. Current estimates suggest that, in many developing countries, a large proportion of the population rely heavily on traditional practitioners and medicinal plants to meet primary health care needs. Although modern medicine may be available in these countries, herbal medicines have often maintained popularity for historical and cultural reasons (Al-Khalil, 1995; WHO, 1991, 1999). Knowing what herbs to take for which ailment is very important. Ideally, a plant can be regarded as ‘‘safe’’ if it is used for both food and medicine.

Local people of the Kapıdağ Peninsula have a long history of traditional uses for plants, which was gained through a long experience. The demographic status of informants in this study was generally over 50 years old, level of education being literate, employed, living generally in towns or villages, more than 10 years in the survey area and gender is mostly male. The percentage of informants below 20 years age is 0.8%, 12.6% between 20- 31 years, 15.1% between 31-49 years and 71.4% for over 50 years age. Level of education of informants was 6.72% illiterate, 57.9% literate and 35.3% graduates from elementary or middle school. Marital status of informants was unmarried 4.2%, married 94.5% and widowed 0.8%. Employment status was employed 55.5% and unemployed 44.5%. In general 7.6% of the informants lived in the large city and 92.4% were town or village dwellers. The duration of residence of informants in the survey area was as follows; less than 10 years 4.2% and more than 10 years 95.8%. Gender of informants was 47.9% females and 52.1% males.

The results on the use of plants as traditional medicine, food, fuel and dyes are presented in tables 1-3. In all 88 taxa belonging to 47 families were recorded to be used ethnobotanically. The primary use is for eczema, including wounds, abscesses, and bleeding followed by the treatment of gastrointestinal disorders, including stomach ache,

ulcers, diarrhoea, haemorrhoids, and respiratory ailments (e.g., the common cold, cough, and bronchitis). A perusal of the tables reveals that mostly used parts are whole plant, leaf and stem. Out of these the number of taxa whose aboveground parts were used was 8 (18.1%), in 10 taxa (22.7%) only leaves were used, stems in 5 taxa (11.4%), roots in 4 taxa (9.1%), flowers in 4 taxa (9.1%), frond in 1 taxon (2.3%), seeds in 2 taxa (4.5%), stems and leaves in 2 taxa (4.5%), leaves and fruits in 2 taxa (4.5%), only fruit in 1 taxon (2.3%), stem barks (2.3%) in 1 taxon, all plant parts in 1 taxon (2.3%), whole plant in 1 taxon (2.3%), leaf and seed in 1 taxon (2.3%), and tuber in 1 taxon (2.3%) (Table 1). Most used parts are fruit, aboveground, leaf and stem. Four species were used for food in all eight villages. These are *Juglans regia* (82.3%), *Olea europaea* subsp. *europaea* (83%), *Castanea sativa* (81.5%), *Rubus canescens* (75.6%). Some plants, such as *Orlaya daucooides*, *Cichorium intybus* and *Hypochoeris radicata* are consumed as fresh salad. A dressing consisting of olive oil and lemon juice is typically added to salads. Some plants, like *Anethum graveolens*, *Foeniculum vulgare*, *Oenanthe pimpinelloides*, *Petroselinum crispum*, *Raphanus raphanistrum*, *Rapistrum rugosum*, *Mentha piperita*, *Urtica dioica* are used in salads to give pleasant fragrant flavours.

It was observed that natural dyeing was not common here in spite of the fact that 4 important dye plants were distributed in this area. If 4 dye plants are classified according to usage parts, leaves of 2 species (50%), stem galls of one species (25%), and bark of root and stem (25%) of one species are used. Wild plants were of less economic value compared with cultivated plants. In this respect, the only wild plants commonly *Rhus coriaria*, *Quercus infectoria*, *Juglans regia* and *Platanus orientalis* are sold in markets and public bazaars. Encouraging the use of natural dyeing in Kapıdağ Peninsula could make valuable contributions to the economy and culture of the peninsula.

Several taxa were recorded as being used for more than one purpose. However, such multipurpose plants were not commonly reported by the villagers. Moreover, the authors were told that the use of such multipurpose plants like *Arbutus unedo*, *Juglans regia* and *Castanea sativa* has decreased markedly in recent years.

We found that local names for most of our taxa were identical to those used in other Turkish cities. However, some local names were very different from those previously recorded (Baytop, 1984). Some plants recorded by us have vernacular names that represent new records for both the district and Turkey, for example, *Nasturtium officinale* (germede), *Rumex tuberosus* (kislek), *Verbascum sinuatum* var. *sinuatum* (çıldır), *Foeniculum vulgare* (çağşır), *Arbutus unedo* (kumarika), *Rubus sanctus* (kapini) and *Papaver rhoeas* (zalla).

The clearing of lands for agriculture, together with the modern farmer's over dependency upon the use of chemical herbicides, has had an adverse effect on the natural vegetation (Şimşek et al., 2005). These changes, in time, could very well bring about an end to traditional folk medicine (Şimşek et al., 2005). In view of this, ethnobotanical studies are becoming more urgent and are focusing particularly on the documentation of traditional uses of plants by native cultures (Özgen et al., 2005). Unfortunately, native people throughout the world are fast losing some of their most important traditions including the knowledge of how to recognize and use economically valuable wild plant species. It is important therefore that we collect and record information as soon as possible and this process should be carried out as many villages as possible because some information may vary from village to village, even when they are situated very close to each other. Indigenous resource management strategies will prove of great help in this connection.

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