

**THE USE OF WILD EDIBLE PLANTS IN KURECİK
 (AKÇADAĞ/MALATYA)**

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ABSTRACT

This paper presents the result of a study on the plants used as food, spice and tea in Kurecik (Akçadağ/Malatya) where 75 wild edible species were identified. Among them 20 species additionally are also being used for medicinal treatments. The families contain that mostly used species are Labiatae (14 species), Rosaceae (10 species), Compositae (10 species) and Polygonaceae (6 species). Some endemic species (10 species) also have been used by local villagers.

ÖZET

Bu çalışmada Kürecik (Akçadağ/Malatya) Bucağı'nda gıda, baharat ve çay olarak kullanılan 75 doğal tür tespit edilmiştir. Bunların arasından 20 tür aynı zamanda tedavi amacıyla kullanılmaktadır. En çok kullanılan bitkilerin bulunduğu familyalar; Labiatae (14 tür), Rosaceae (10 tür), Compositae (10 tür) ve Polygonaceae (6 tür)'dir. Bazı endemik türler de (10 tür) bölgede yaşayanlar tarafından kullanılmaktadır.

Key words: Kürecik, Akçadağ, Edible wild plants, Ethnobotany

INTRODUCTION

This study complies and evaluates the edible plants in Kürecik (Akçadağ/Malatya) district, located in East Anatolia Region of Turkey. It is composed by highland place up to 3200 m. There are wide plateaus and plains created by the lava and ashes from the extinct volcanoes also Başyurt Plateau is the

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highest region (2000-2500 m) in Malatya.

The research area is distributed in 20 villages (Fig. 1) and has a population of 5000 inhabitants. Irano-Turanian phytogeographic region are largely represented in the area.

Vegetation has small worn hills and extinct formations are very common in the area. As tree and shrubs: *Crataegus* sp., *Pyrus* sp., *Rosa* sp., *Berberis* sp., *Juniperus* sp. and *Cerasus* sp.; herbaceous plants: *Opoponax*, *Ferula* and endemic *Astragalus* species are widespread.

Although Kürecik has very rich flora and plant culture, people who live there immigrate to big cities so this causes to reduce relationships with the plants. This study aimed to record wild edible plant knowledge from Kürecik before it disappears. A literature survey about wild edible and used as tea plants in Kürecik revealed no previous research on this region (9).

MATERIAL AND METHOD

This study is a part of the thesis which titled to "An Ethnobotanical Study in Kürecik (Akçadağ / Malatya)" carried out during 2005-2007 (8). The information about the local name, parts of plants used, method of preparation was obtained from local healers. These people consist of generally middle aged and elderly women. Questions were asked to the inhabitants and their answers recorded in a questionnaire form.

The Flora of Turkey and the East Islands (1, 2), Check Lists (3, 4, 5), Flora Iranica (6) and Flora URSS (7) were mainly used for the identification of research material. Identified species were compared with other specimens in herbaria. Voucher specimens of each species were deposited in the Herbarium of Istanbul University, Faculty of Pharmacy, (ISTE) and were given an ISTE number. Without voucher number samples are indicated as "Y" and endemic species are bold typed in Table.

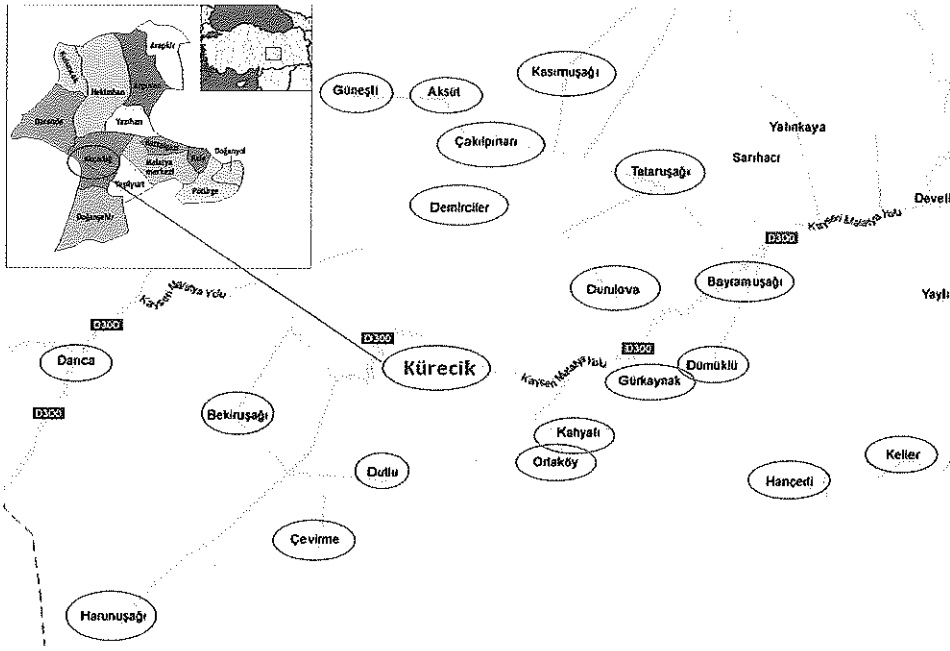


Figure 1. The map of Kürecik (Akçadağ/Malatya) Malatya and Turkey

RESULT AND DISCUSSION

According to the result, 75 wild species (77 taxa) from 23 families have been recorded as edible plants in Kürecik. 10 species (11 taxa) of them are endemic. The plants mostly belong to Labiatae (14 species), Rosaceae (10 species), Compositae (10 species) and Polygonaceae (6 species) families. The genera by the highest number of species in the study are ranged as follow: *Salvia* L. (5 species); *Rumex* L. (4 species), *Crataegus* (3 species), *Pyrus* (3 taxa) and *Thymus* (3 taxa). The list of used plants in the area is arranged in alphabetical order of their families and botanical names along with relevant information in Table. Also two graphics are composed about used parts (Figure 2) and preparation methods (Figure 3).

Arum detruncatum var. *detruncatum* is known poisonous in the region. For this, its leaves firstly are boiled in çökelik (a traditional low-fat cheese) or cheese water then made either a soup with yogurt or roasted with onion and adding egg. If leaves couldn't use at the time, cute up and dried on sun

light to use for using another time.

Leaves of *Allium orientale* and *A. kharputense* are been carefully collected without displace the bulb. If the bulbs are displaced, people will plant them again to near of their house.

Mostly leaves (and aerial parts) are used in the receipts. For the preparation methods, the plants mainly are roasted directly or after boiling.

Roasted species such as *Chenopodium album* subsp. *album* var. *album*, *Chenopodium foliosum*, *Cichorium intybus*, *Medicago x varia*, *Vicia peregrina*, *Allium orientale*, *A. vineale*, *A. kharputense*, *Eremurus spectabilis*, *Malva neglecta*, *Polygonum arenastrum*, *Polygonum cognatum*, *Rumex patientia*, *Amaranthus retroflexus*, *Anchusa strigosa*, *Anchusa arvensis*, *Silene vulgaris* var. *vulgaris*, *Beta trigyna* and *Malva neglecta* are sliced thinly, fried then eaten. These species also are boiled to make a soup by adding yogurt.

Stems of *Asyneuma limonifolium*, *Gundelia tournefortii* var. *tournefortii*, *Onopordum polycephalum*, *Scorzonera tomentosa*, *Salvia candidissima* subsp. *candidissima*, *S. frigida*, *S. migrostegia*, and *S. virgata* species peeled off and eaten raw.

Green salads are prepared using the leaves of *Capsella bursa-pastoris*, *Tragopogon latifolius* var. *angustifolius*, *Scorzonera mollis* subsp. *szowitzii*, *Rumex acetosella*, *R. scutatus*, *R. tuberosus* subsp. *horizontalis* and *Sinapis arvensis* species.

Spice plants are generally dried before using.

There are some traditional receipt in the region. The most of them:

“Könbe” or “klor” is a traditional pastry, generally these plants are used: *Allium orientale*, *A. vineale*, *A. kharputense*.

“Pilav” is prepared by using *Allium orientale*, *A. vineale*, *A. kharputense*, *Gundelia tournefortii* var. *tournefortii* and *Tragopogon latifolius* var. *angustifolius*. They are boiled with cracked wheat (bulgur) in water.

“Katma” is like a pancake, for the meal are used the species of *Allium orientale*, *A. vineale*, *A. kharputense*, *Chenopodium album* subsp. *album* var. *album*, *Beta trigyna*, *Silene vulgaris* and *Amaranthus retroflexus*. Fresh leaves mixed with oil and sometimes red pepper. Then they are cooked by putting into dough.

“Çorba” is prepared with milk; underground parts of *Crocus cancellatus*

subsp. *damascenus* and *Geranium tuberosum* subsp. *tuberosum* are boiled in milk.

“Tarhana” is made by using the fruits of *Crataegus orientalis* var. *orientalis* and *C. x bornmuelleri*. They are crushed and then dried in pieces for eaten later.

“Dolma” is prepared by using *Rumex patientia* leaves. Prepared mixture is wrapped by the leaves.

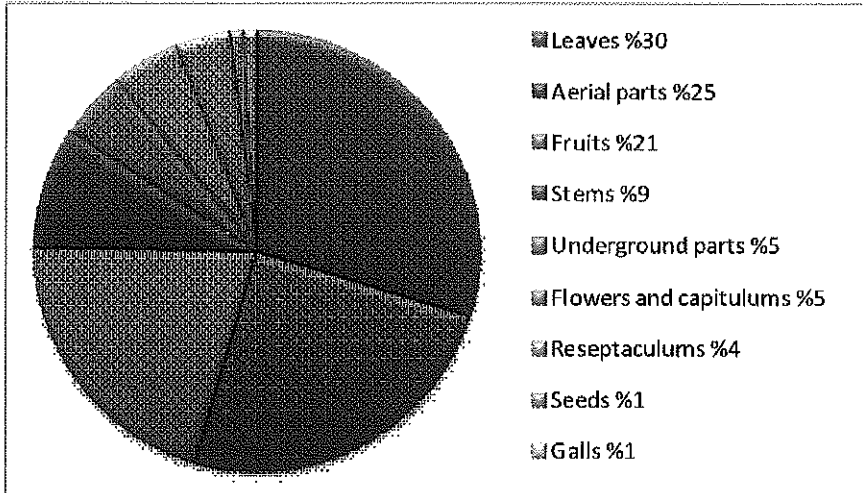


Figure 2. The Graphic of Used Parts

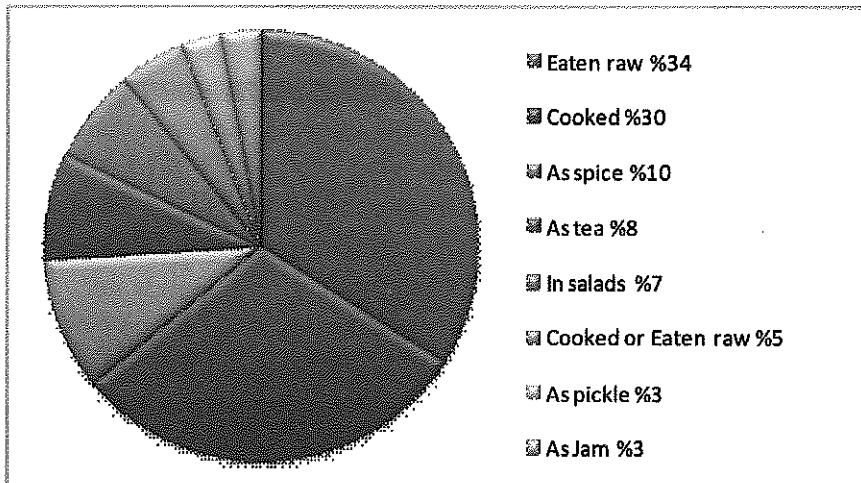


Figure 3. The Graphic of Preparation

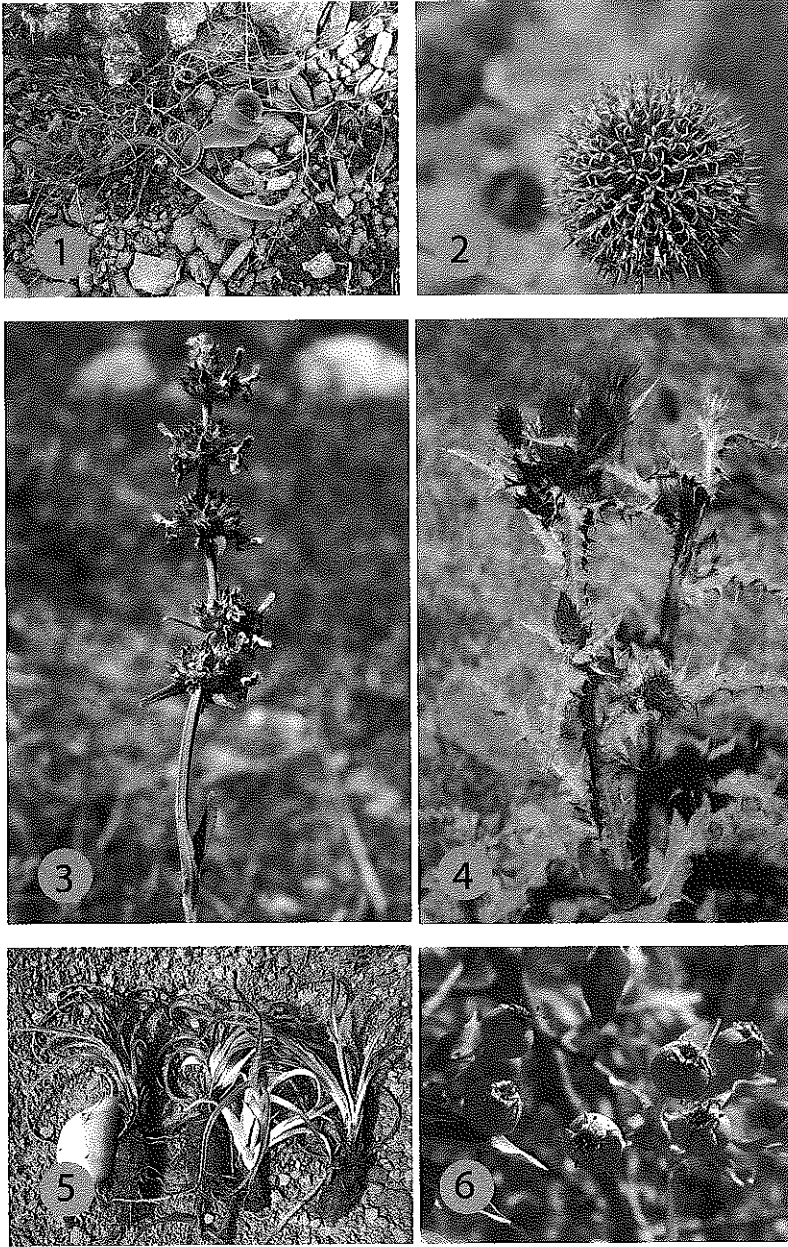


Figure 4. Photographes of some wild edible plants from Kürecik (Akçadağ/Malayta); 1. *Allium orientale*, 2. *Echinops oreintalis*, 3. *Stachys cretica* subsp. *cretica*, 4. *Onopordum polycephalum*, 5. *Scorzonera mollis* subsp. *szowitzii*, 6. *Pyrus elaeagnifolia* subsp. *elaeagnifolia*

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Table. Edible Plants in Kürecik (Bold typed species are endemic).

Family/species/(voucher number)	Local name	Used parts	Preparation
Amaranthaceae <i>Amaranthus retroflexus</i> L. (ISTE 83 608,83 697,83 741)	Bostan bozuntusu	leaves	roasted
Araceae <i>Arum detrunctatum</i> C.A.Meyer ex Schott var. <i>detrunctatum</i> ISTE (83 741)	Nivic	leaves	boiled; before dried and boiled then roasted
Berberidaceae <i>Berberis crataegina</i> DC. (ISTE 83 721, 83771)	Karamuk	fruits and leaves	eaten raw
Boraginaceae			
<i>Anchusa arvensis</i> (L.) Bieb. subsp. <i>orientalis</i> (L.) Nordh. (ISTE 83 648)	Frez, Kara dingding, Mijik, Mijmijik	leaves	roasted
<i>Anchusa strigosa</i> Labill. (ISTE 83 652)	Frez, Kara dingding, Mijik, Mijmijik	leaves	roasted
Brassicaceae			
<i>Capsella bursa-pastoris</i> (L.) Medik. (ISTE 83 910)	Çaçıkçınağ, Çaçıkçaynağ	leaves	in salad
<i>Sinapis arvensis</i> L. (ISTE 83 619)	Hardal	leaves	in salad
Campanulaceae <i>Asyneuma limonifolium</i> (L.) Janchen subsp. <i>limonifolium</i> (ISTE 83 609, 83 686)	Karangtujuk	stems	peeled off and eaten raw
Caryophyllaceae			

<i>Silene conoidea</i> L. (ISTE 83 615)	Brejka şıvanan	seeds	eaten raw
<i>Silene vulgaris</i> (Moench) Garcke var. <i>vulgaris</i> (ISTE 83 589, 83 605)	Ağcık, Ağzık	stems and leaves	roasted; boiled; in “çorba”; in “katma”
Chenopodiaceae			
<i>Beta trigyna</i> Waldst. & Kit. (ISTE 83 693, 83 887)	Suri	leaves	roasted; in “çorba”; in “katma”
<i>Chenopodium album</i> L. subsp. <i>album</i> var. <i>album</i> (ISTE 83 606, 83 696)	Sılmık	aerial part	roasted; in çorba; in katma
<i>Chenopodium foliosum</i> (Moench) Aschers. (ISTE 83 590)	Mağalok, Tırıye çukan	fruits leaves	eaten raw; roasted; boiled
Compositae			
<i>Anthemis tinctoria</i> L. var <i>pallida</i> DC. (ISTE 83 637)	Kingözü, Papatya	capitulums	as tea
<i>Centaurea depressa</i> Bieb. (ISTE 83 653)	Kingözü	capitulums	as tea
<i>Chondrilla juncea</i> L. var. <i>juncea</i> (ISTE 83 858)	Çıtlık	aerial parts	roasted
<i>Cichorium intybus</i> L. (ISTE 83 925)	Çıtlık	aerial parts	in salads
<i>Gundelia tournefortii</i> L. var. <i>tournefortii</i> (ISTE 83 639)	Karang, Kereng	aerial parts and roots	peeled off and eaten raw
<i>Echinops orientalis</i> Trautv. (ISTE 83 654)	Topık ıstri	receptacle	eaten raw
<i>Onopordum polycephalum</i> Boiss. (ISTE 83 709)	Kalganık, Kalgan, Kavlanık	stems	peeled off and eaten raw
<i>Tragopogon latifolius</i> Boiss. var. <i>angustifolius</i> Boiss. (ISTE 83679)	Isping, Yemlik	leaves	eaten raw; in “pilav”; in “çorba”

<i>Scorzonera mollis</i> Bieb. subsp. <i>szowitzii</i> (DC.) Chamberlain (ISTE 83 878)	Burcalıg, Burrum, Burrun, Burrun pısık, Purrik	underground and aerial part	eaten raw; in "pilav"; in "çorba"
<i>Scorzonera tomentosa</i> L. (ISTE 83 663, 83 678, 83 736)	Neraband	aerial part	peeled off and eaten raw
Convolvulaceae			
<i>Convolvulus arvensis</i> L. (ISTE 83 685)	Sarmaşıg, Sarmaşıge raş	aerial parts	roasted
<i>Convolvulus galaticus</i> Rostan ex Choisy (ISTE 83 686)	Sarmaşıg, Sarmaşıge ıspi	aerial parts	roasted
Elaeagnaceae			
<i>Elaeagnus angustifolia</i> L. var. <i>angustifolia</i> (ISTE 83 914)	Sıng	fruits	eaten raw
Fabaceae			
<i>Cicer anatolicum</i> Alef. (ISTE 83 880)	Nakaçe	immature seeds	eaten raw
<i>Medicago x varia</i> Martyn (ISTE 83 618)	Yonca paser, Yonca raş	aerial part	roasted; in "çorba"; in "katma"
<i>Vicia peregrina</i> L. (ISTE 83 737)	Kavli	aerial part	roasted; in "çorba"; in "katma"
Geraniaceae			
<i>Geranium tuberosum</i> L. subsp. <i>tuberosum</i> (ISTE 83 888)	Kokali, Mavalok	underground parts	eaten raw; in "çorba"
Iridaceae			
<i>Crocus cancellatus</i> Herbert subsp. <i>damascenus</i> (Herbert) Mathew (ISTE 83 725)	Pivık, Pivok	underground parts	eaten raw; in "çorba"
<i>Iris persica</i> L. (ISTE 83 724)	Bılazık	flowers	eaten raw
Juglandaceae			

<i>Juglans regia</i> L. (Y-361)	Ceviz, Cuz	fruits	eaten raw
Labiatae			
<i>Marrubium parviflorum</i> Fisch. & Mey. subsp. oligodon (Boiss.) Seybold (ISTE 83 708)	Çaya çe, Dağ çayı	aerial part	as tea
<i>Mentha longifolia</i> (L.) Hudson subsp. <i>typhoides</i> (Briq.) Harley var. <i>typhoides</i> (ISTE 83 661)	Pung	leaves	as spice
<i>Salvia candidissima</i> Vahl subsp. <i>candidissima</i> (ISTE83 647)	Palağ	stems	peeled off and eaten raw
<i>Salvia frigida</i> Boiss. (ISTE 83 592, 83 705)	Palaği mor	stems	peeled off and eaten raw
<i>Salvia microstegia</i> Boiss. & Bal. (ISTE 83 867)	Palaği barun	stems	peeled off and eaten raw
<i>Salvia syriaca</i> L. (ISTE 83 614)	Sevik	gall	eaten raw
<i>Salvia virgata</i> Jacq. (ISTE 83 592, 83 705)	Palaği mor	stems	peeled off and eaten as raw
<i>Satureja hortensis</i> L. (ISTE 83 677)	Yanığ	aerial part	as spice
<i>Sideritis libanotica</i> Labill. subsp. libanotica (Bentham) Bornm. (ISTE 83 644)	Çaya çe, Dağ çayı	aerial part	as tea
<i>Stachys cretica</i> L. subsp. <i>anatolica</i> Rech. fil. (ISTE 83 638)	Çaya çe, Dağ çayı	aerial part	as tea

<i>Stachys cretica</i> L. subsp. <i>mersinaca</i> (Boiss.) Rech. fil. (ISTE 83 630)	Çaya çe, Dağ çayı	aerial part	as tea
<i>Thymus fallax</i> Fisch. & Mey. (ISTE 83 634)	Catır, Catri	aerial part	as spice
<i>Thymus kotschyanus</i> Boiss. & Hohen. var. <i>kotschyanus</i> (ISTE 83 769)	Catır, Catri	aerial part	as spice
<i>Thymus sipyleus</i> Boiss. subsp. <i>rosulans</i> (Borbás) Jalas (ISTE 83 862, 83 875)	Catır, Catri	aerial part	as spice
<i>Ziziphora clinopodioides</i> Lam. (ISTE 83 735)	Catır, Catri	aerial part	as spice
Liliaceae			
<i>Allium kharputense</i> Freyn & Sint. (ISTE 83 913)	Kıvılcım	leaves	boiled; in "könbe"; in "pilav"; roasted
<i>Allium orientale</i> Boiss. (ISTE 83 911)	Kıvırcık, Kıvılcım	leaves	boiled; in "könbe"; in "pilav"; roasted
<i>Allium vineale</i> L. (ISTE 83 923)	Sirmok	leaves	boiled; in "pilav"; roasted
<i>Eremurus spectabilis</i> Bieb. (ISTE 83 924)	Gullık	leaves	boiled; in "pilav"; roasted
Malvaceae			
<i>Malva neglecta</i> Wallr. (ISTE 83 731)	Tolık	leaves	in "könbe"; roasted
Moraceae			
<i>Ficus carica</i> L. subsp. <i>rupestris</i> (Hausskn.) Browicz (ISTE 83 664)	Hincir	fruits	eaten raw

Papaveraceae			
<i>Papaver dubium</i> L. subsp. <i>laevigatum</i> (M. Bieb.) Kadereit (ISTE 83 611, 83 713)	Kulilkasor, Lala	leaves	in "könbe"; roasted
<i>Papaver macrostomum</i> Boiss. et Huet ex Boiss. (ISTE 83 610, 83 772)	Kulilkasor, Lala	leaves	roasted
Polygonaceae			
<i>Polygonum arenastrum</i> Bor. (ISTE 83 597)	Bezmece otu, Ca surık	aerial part	boiled; roasted
<i>Polygonum cognatum</i> Meissn. (ISTE 83 687, 83 773)	Bezmece otu, Ca surık	aerial part	boiled, roasted
<i>Rumex acetosella</i> L. (ISTE 83 596, 83 625, 83 631)	Tırşık çuçikan	leaves	in salad
<i>Rumex patientia</i> L. (ISTE 83 702, 83 709)	Tırşık karan	leaves	roasted; in "dolma"
<i>Rumex scutatus</i> L. (ISTE 83 665, 83 703)	Tırşık kavan	leaves	in salad
<i>Rumex tuberosus</i> L. subsp. <i>horizontalis</i> (Koch) Rech.(Y- 327)	Tırşık marıyan	leaves	in salad
Rosaceae			
<i>Cerasus hippophaeoides</i> (Bornm.) Bornm. (ISTE 83 646, 83 671)	Ceraz, Ceraza çe, Dağ kirazı	fruits	eaten raw; as jam
<i>Cerasus microcarpa</i> (C.A.Meyer) Boiss. subsp. <i>tortuosa</i> (Boiss. & Hausskn.) (ISTE 83 669, 83 671)	Ceraza zar, Sarı dağ kirazı	fruits	eaten raw
<i>Crataegus meyeri</i> Pojark. (ISTE 83 786)	Roğık, Rığok	fruits	eaten raw

<i>Crataegus orientalis</i> Palas ex Bieb. var. <i>orientalis</i> (ISTE 83 645)	Cıvica sur, Gıvica sur, Alıç	fruits	eaten raw
<i>Crataegus x bornmuelleri</i> Zabel (ISTE 83 785)	Cıvica zar, Gıvica zar, Alıç	fruits	eaten raw
<i>Orthurus heterocarpus</i> (Boiss.) Juz. (Y-324)	Kulafir, Karanfil	rhizomes	as spice
<i>Pyrus elaeagnifolia</i> Pallas subsp. <i>elaegnifolia</i> (ISTE 83 717)	Bozıka hur, Küçük armut	fruits	eaten raw
<i>Pyrus elaeagnifolia</i> Pallas subsp. <i>kotschyana</i> (Boiss.) Browicz (ISTE 83 718)	Bozıka hur, Küçük armut	fruits	eaten raw
<i>Pyrus syriaca</i> Boiss. var. <i>microphylla</i> Zoh. ex Browicz (Y-323)	Bozıka hur, Küçük armut	fruits	eaten raw
<i>Rosa canina</i> L. (ISTE 83 783)	Şılan	flowers, fruits	eaten raw; as jam
<i>Rubus sanctus</i> Schreber (ISTE 83 666)	Dırri	fruits	eaten raw
Umbelliferae			
<i>Grammosciadium daucoides</i> DC. (Y-366)	Kami	fruits	as spice
<i>Opoponax hispidus</i> (Friv.) Gris. (ISTE 83 870)	Haltz, Heliz, Kırkora zar	stems	as pickle
<i>Prangos platychlaena</i> Boiss. ex Tchihat. (ISTE 83 706)	Çağsır Kırkor, Korkor	aerial part	as pickle
Urticaceae <i>Urtica dioica</i> L. (ISTE 83 621, 83 667)	Gazık	aerial part	roasted