

# Some wild plants harvested from nature and consumed

## Abstract

The region where the plant collections were made has a temperate climate and is located in the north of Turkey. Various plant species are distributed in the region where both maritime and continental climates prevail. Within this vegetation, there are many plants that local people collect and consume from nature and believe to be medicinal. The research was carried out in three large public markets in Samsun province for about four months between March and June in 2023. It was observed that the most consumed plants were *Trachystemon orientalis* L., *Ornithogalum sigmoideum*/O *orthophyllum*, *Oenanthe pimpinelloides* L., *Smilax aspera* L., *S. excelsa* L. and *Urtica dioica* and a mixture of plants containing different wild plant species, which the local people define as “herb mixture”. It was reported that the plants are consumed as vegetable dishes by cooking, pickling, boiling or soup. These plants are collected from the natural environment in March, April and May, during different growth periods of the plants and sold in the markets. As a result of this study, it was concluded that the collection of rhizomatous and bulbous plants such as *Trachystemon orientalis* L., *Ornithogalum sigmoideum*/O *orthophyllum* should be done in a way that the generation of the plant will continue, and that it may be useful to determine the secondary components of these plants, which are consumed by believing that they are medicinal, in different developmental periods and to provide a source for future studies.

**Keywords:** food, wild plant, nature area, consumed, medicinal plant

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## Introduction

Turkey has a wide ecological diversity due to climate differences, topographic, geological and geomorphological diversity, diversity of different water environments such as sea, lake, rivers, elevation differences, being at the junction of three different plant geographies. There are approximately 12456 plant species in the flora and 4056 endemic species. In terms of plant biodiversity, Turkey ranks first among the temperate zone countries.<sup>1</sup> Samsun province, which is the research region, is located in the Central Black Sea region in the north of Turkey. Samsun province is rainy almost every season, hot in summer and mild in winter. The plants collected from nature and consumed in Samsun are more or less similar to the plants consumed in the whole Black Sea region. The medicinal values of these plants have been told since ancient times and have come to the present day. Researchers who examined the plants collected from nature, *Plantago major* and *P. lanceolata* L., *Urtica dioica*, *Smilax excelsa* L., *Malva sylvestris* L., have been used for various purposes such as eczema, stomach and intestinal complaints, asthma, cough, diabetes, wound treatment.<sup>2,3</sup> *Plantago intermedia* and *Trachystemon orientalis* have antimicrobial properties.<sup>4</sup>

In recent years, as in the world, interest in nutrition with natural products and the use of medicinal plants has been increasing in our country. Today, additive foods with long shelf life, herbal products that are over sprayed against diseases and pests and fertilized with different chemical fertilizers for high yields are just a few of the factors that support unhealthy nutrition and disrupt our immune system. In our world, which is developing in every aspect, in addition to individual efforts, the food and pharmaceutical sectors, especially agriculture, are in search of different ways to produce healthy products. Among these, it is possible to find many examples such as natural cosmetic products, plant extracts that strengthen the immune system, natural antioxidants used in the food sector, wound burn creams made from plant extracts, plant oils used in aromatherapy.<sup>5</sup> Since the existence of mankind, plants in nature have been utilized for different purposes in

many countries, some of them have been cultivated and some of them are still consumed by collecting them from nature.<sup>6</sup> In this study, some plants harvested from nature and consumed in Samsun province and their consumed methods were examined.

## Material and methods

The data in the article consist of the botanical and local names, collection times, parts used, and monthly consumption amounts of the plants collected from nature and sold in public markets in the center and district villages of Samsun province located in the north of Turkey. The main objectives of the study are to reveal the medicinal properties of the plants, to determine the species that are in danger of extinction by being collected from nature and to put forward solution methods against this problem. The research started on March 1, 2023, the date when the plants were first brought to the market, and ended on June 21, 2023. The end date of the research was determined as the date when the consumption of the collected plants decreased due to flowering and aging. In order to collect data for the study, “Unkapanı Bazaar”, “Modern Bazaar” and “Station Bazaar”, which are defined as the biggest public bazaars established in the center of Samsun province, were visited every week on Saturday from 7.00 in the morning. During these visits, plant photographs were taken, plant samples were taken for herbarium, quantities of products brought to the market, places of collection from nature, consumption patterns and consumption purposes were recorded. Species identification and description of the plants were made according to Baytop, Bown, and Tekin.<sup>7-9</sup>

Samsun is located in the Central Black Sea Region of the Black Sea Region in northern Turkey. The total area of the province is 9.725 km<sup>2</sup>. The city is located between the deltas formed by two large rivers. Of the total land area, 45% is made up of mountains, 37% of plateaus and 18% of plains. The total agricultural area is 374,094 hectares. Samsun is also one of the most important port cities of the Black Sea Region. The province, which is rich in terms of vegetation and



**Table 1** Some wild plants collected from nature and consumed

Botanical name	Family	Traditional name	Therapeutic effects	Used part	Consumed method
<i>Ornithogalum sigmaideum/O. orthophyllum</i>	Asparagaceae	Tükürük otu, sarıca, çiğdem	Constipation relief, sugar lowering, cholesterol lowering	Bulbs with leaves and buds	Boiled and roasted, pickled, canned
<i>Trachystemon orientalis L.</i>	Boraginaceae	Kaldırık, zılbıt, ispit, kaldırıyak	Blood purifier, diuretic, antipyretic, skin softener	Rhizome, flower bud, stem and leaf	Boiled and roasted, pickled, canned
<i>Urtica dioica L./Urtica urens</i>	Urticaceae	Isırgan,sırgan	diabetes, eczema, hemorrhoids, prostate, cystitis, rheumatism	Fresh leaf, young seedling	Food, soup, boiled and roasted
<i>Oenanthe pimpinelloides L.</i>	Apiaceae	Gazyak, kazayağı	Digestive aid, appetite stimulant, antioxidant	Young seedling	Pickles, boiled and roasted
<i>Smilax aspera L., S.excale L.</i>	Smilacaceae	Kırçan, dikenucu, melevcan	Blood purifier, diuretic, appetite stimulant, heel crack treatment	Young shoot tips	Pickles, boiled and roasted
* <i>Polygonum cognatum</i> Meissn, <i>P. arenastrum</i>	Polygonaceae	Madımak, kuşekmeği	Digestive facilitator, appetite stimulant	Young seedling, leaves	hot meal
<i>Capsella bursa-pastoris L. Medik</i>	Brassicaceae	Çoban çantası	Wound healing, against hemorrhoids and hypertension	Young seedling	hot meal
<i>Chenopodium album</i>	Chenopodiaceae	Ak sirken, unlu pancar	Constipation reliever	Young seedling	hot meal
<i>Amaranthus chlorostachys willd., A. retroflexus L.,</i>	Amaranthaceae	Karasirken, horoz ibiği	Constipation reliever	Young seedling	hot meal
<i>Malva neglecta</i>	Malvaceae	Ebegümeçi, gömec	Cough suppressant, intestinal softener	leaves	hot meal
<i>Papaver rhoeas</i>	Papaveraceae	gelincik	Cough suppressant	Young seedling	hot meal
<i>Sisymbrium altissimus</i>	Brassicaceae	Diken pancarı,	bilinmiyor	Young seedling	hot meal
<i>Plantago major, Plantago media</i>	Plantaginaceae	Sinir otu, yaraotu	Eczema, stomach pain, ulcers, gastritis	leaves	hot meal
<i>Sinapsis arvensis, Brassica nigra</i>	Brassicaceae	Kara pancar	Toothache Relief	Young seedling, leaves	hot meal
<i>Rumex crispus</i>	Polygonaceae	Labada, evelik	Constipation relief	Young seedling, leaves	hot meal
<i>Bellis perennis</i>	Asteraceae	Papatya, koyun gözü	Against the common cold	Young seedling	hot meal
<i>Gernium asphodeloides/ G. sylvaticum</i>	Geraniaceae	Turna gagası, güvercin topu	Colitis, ulcers, dysentery	Young seedling	hot meal
<i>Cichorium intybus/ Taraxacum officinale</i>	Asteraceae	Yabani hindiba/hindiba	Stomach pain, ulcers, liver disorders	Young seedling	hot meal

\*The plants after the plants marked in the table are included in the herb mixture called "mix herb". The plants in the mix are consumed as a meal by adding foods such as rice, corn and wheat bulgur, crushed corn, corn flour, or boiled and roasted with onion and garlic.

**Table 2** Monthly collection amounts of plants consumed by collecting from nature in Samsun (Turkey) Province

Botanical name	Month				Total** kg
	March	April	May	June	
<i>Ornithogalum sigmaideum/O. orthophyllum</i>	359	2949	1678	10<	4986
<i>Trachystemon orientalis L.</i>	6843	20960	8721	1255	37779
<i>Urtica dioica</i>	959	1650	1351	800	4760
<i>Oenanthe pimpinelloides L.</i>	977	940	558	-	2475
<i>Smilax aspera L., S.excale L.</i>	-	650	3769	1254	5673
Herb mix*	1808	2744	1055	205	5812

\*The herb mixture some wild plants and it is explained in the result part \*\*. The result of only three big market of Samsun province.

Nettle (*Urtica dioica /U urens*) is considered indispensable in the local cuisine and its fresh leaves and shoots are consumed. It is collected and consumed starting from the period when it has 2-4 leaves in spring until the beginning of flowering. The plant, which is available in the markets until the end of June, is easily propagated by seeds and rhizomes. The plant, which spreads as a weed especially in hazelnut gardens, is made into soup made with corn flour and broth, herbal tea, food and roasted. It is a plant consumed by local people as a source of healing. It is generally not consumed in summer due to the fibrous plant tissues.

Another plant consumed is *Oenanthe pimpinelloides L.*, which reproduces by seeds. The plant, which is consumed especially by making pickles, is collected from barren areas and hazelnut gardens by cutting the root crown with a knife for about 2-3 months until the flower stalks are formed. It is not possible for the plant harvested in this way to regenerate shoots from the parts remaining in the soil, and since it is collected before flowering, it is prevented from producing seeds. *Smilax aspera L., S excale L.*, which grows in forest and field



edges, *maquis* areas, the reddish shoots that develop at the ends of the branches in March-April and May are collected until they become fibrous and harden and are used as in other plants (Table 1).

In addition, especially in March-April, the first growth period of plants, *Polygonum cognatum* Meissn, *P arenastrum*, *Capsella bursa-pastoris* L Medik, *Chenopodium album*, *Amaranthus chlorostachys willd*, *A retroflexus* L, *Malva neglecta*, *Papaver rhoeas*, *Sisymbrium altissimus*, *Plantago major* and *Plantago media*, *Sinapsis arvensis*, *Rumex crispus*, *Bellis perennis*, *Gernium asphodeloides*, *G sylvaticum*, *Cichorium intybus* and *Taraxacum officinale* species, which are fresh plants with 2-6 leaves and not in bloom, and it was determined that this mixture of about 20 plant species was made into a juicy dish and consumed with pleasure. The variety and amount of wild plant species in the mixture varied according to the collector, the biodiversity of the region where it was collected and the season (Table 2).

In the interviews with consumers in the markets, it was found that *Trachystemon orientalis* L. is a satiating, relieving constipation, stomachic, expectorant, *Smilax aspera* L, *S excale* L, is digestive, constipation relieving, appetizing, *Urtica dioica* L/U *Urens* L are immune system strengthening, blood forming, kidney working, rheumatic pains curing, *Oenanthe pimpinelloides* is appetizing, toxin removing, digestive facilitating.

## Conclusion

It was determined that a significant amount of different plant species were collected from the center and district villages of Samsun province and brought to the market, and these plants provided an additional income to the producers. It was seen that the medicinal values or the benefits of these consumed plants were based on traditional knowledge. When the results of the research are evaluated in general, it is determined that there is a need to determine the secondary components of the plants in different development periods. During the harvesting, it was concluded that plant propagation material such as seeds, rhizomes and bulbs were harvested without leaving them for the next year and that informative and educational

measures should be taken for this.

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## Conflicts of interest

Any conflict of interest exists in this research.

## References

- Demirci B, B Çal. Mapping edible herbs in turkey. *Akademik MATBUAT*. 2024;8(1).
- Tuzlacı E, E Tolon. Turkish folk medicinal plants, part III: şile (istanbul). *Fitoterapia*. 2000;71:673–685.
- Tuzlacı E, EP Aymaz. Turkish folk medicinal plants, part VI: gönen (balıkesir). *Fitoterapia*. 2001;72:323–343.
- Uzun E, Sarıyar G, Adsersen A, et al. Traditional medicine in sakarya province (turkey) and antimicrobial activities of selected species. *Journal of Ethnopharmacology*. 2004;95:287–296.
- Baydar H. *Science and Technology of Medicinal and Aromatic Plants*. 2022.
- Mutlu H. Edible wild plants and consumption methods in afyonkarahisar. *Journal of Tourism and Gastronomy Studies*. 2023;11 (2):1696–1726.
- Baytop T. *Dictionary of plant names in Turkish*. Atatürk Culture, Ankara. 1994.
- Bown D. *Encyclopedia of Herbs and Their uses*. The Royal Horticultural Society. 1995.
- Tekin E. *The Most Beautiful Wild Flowers of Turkey*. 2005.
- Yılmaz C, H Zeybek. *Canik Municipality Culture Publications*. 2016.
- Karagöz İ. *Food names in Samsun and its districts*. 2006;663–670.