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Medicinal Plants of the Lakes Region (Türkiye) and their Uses in Folk Medicine

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Abstract
The aim of this study is to reveal the medicinal plant potential and methods of use in the Lakes Region (Isparta, Burdur, Antalya). The majority of the plants mentioned in this article were collected locally by us, their scientific names determined, and are now protected in the GUL Herbarium (Isparta). Lists of herbarium records and uses of medicinal plants have been prepared. Accordingly, the region contains approximately 230 medicinal taxa, including 35 Gymnosperms, 165 Angiosperms, 10 ferns, and 8 mushrooms. While the lists also provide information on the plant's uses, the methods of utilization are not detailed. Furthermore, 65 of these taxa are aromatic, 60 are poisonous/narcotic, 25 are dye plants, and approximately 10 are forest trees. The distribution of medicinal plants used in the region by major families is as follows: Pinaceae 8, Cupressaceae 4; Liliaceae 7, Orchidaceae 10, Poaceae 6; Rosaceae 35, Lamiaceae 25, Asteraceae 16, Apiaceae and Fabaceae 13, and Solanaceae 7. The most commonly used plants belong to the Dicotyledonous class. The most commonly used plant organs are flowers, fruits, seeds, leaves, and rhizomes. The most common methods of using plants in folk medicine are applying their oils to the skin and taking them orally after processing into food. Aromatic and functional food plants hold an important place. The least common applications are in the form of incense, gum, and soap. A significant portion of the medicinal plants are obtained or produced from the region's natural flora. No such comprehensive study has been conducted in the region before. The study is expected to contribute to pharmaceutical botany as well as to the medical and health sciences.

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INTRODUCTION

Plants have been used for nutrition, food, fuel, dye, and healing since ancient times. Phytotherapy is a health science that uses plants to treat patients or as health-protective and health-promoting agents. It can be administered in a healthcare facility under the supervision of healthcare personnel or by experienced members of the public (especially older women), namely folk healers. Phytotherapy can be applied to many ailments today and is becoming

increasingly widespread. Treatment with aromatic plants is called 'aromatherapy'. It is a field of application of phytotherapy and is better known than others. Essential oils, fixed oils, hydrolates (oil-based plant waters), macerated oils, vitamins, minerals, nutritional supplements, and resins are important raw materials used in aromatherapy (Akgül, 1993; Bayır and Cebe, 2023; Baytop, 1984).

Türkiye is a country rich in medicinal and aromatic plants. The people of Anatolia have used plants for healing purposes for centuries. Such practices were not carried out by random individuals, but rather by elderly and experienced women or folk healers. In Turk culture, knowledgeable and skilled women are known as 'midwives' (*ebe*), while men are called 'elders' (*dede*). The term 'birth midwife' (*doğum ebesi*) is still in common use today. Therefore, folk remedies are also known in Türkiye as 'old wives remedies'(kocakarı ilaçları) (Özçelik, 2022).

The history of healing practices is known to be as old as human history itself. In the early periods of history, life and death were associated with the earth, and women, being in contact with the earth, the source of life, were considered its representatives on earth (Öztürk Türkmen, 2011). Historical and cultural narratives throughout the world contain beliefs that knowledge of the mysteries of life and death belonged solely to women, and that healing practices were initially carried out by women (Achterberg, 2009). During the Aegean Civilizations, Agnodice, who had to conceal her female identity to practice her profession, is considered one of the first female physicians in history. Sociocultural changes diminished the position of women in society, gender roles were shaped to their disadvantage, and women's roles in ancient fields of knowledge, such as healing, were limited. In the Middle Ages, women in western countries were often accused of witchcraft and collaborating with the devil, and they paid for their healing powers with their lives (Achterberg, 2009; Gün and Şahinoğlu, 2013). In this context, the healing practices of women in Anatolia reveal unique and culturally specific features.

As reported in some ethnobotanical studies conducted in Türkiye (Alan et al., 2012; Altay et al., 2015; Bağcı et al., 2006; Fakir et al., 2009; Gökyıldız et al., 2013), the number of plant species used for medicinal purposes among the public is 500, and the number of medicinal plant species registered in the codexes is approximately 150. According to the World Health Organization (WHO), the number of plant species with medicinal use is around 21,000. Only about 15 % of these plant species have been studied chemically and pharmacologically (Baytop, 1984; Faydaoğlu and Sürücüoğlu, 2011; Sargın, 2015). While the number of plants to be studied in pharmacological studies is decreasing, it is also increasing through ethnobotanical studies. Therefore, the use of herbal treatments has been steadily increasing. The practice of employing medicinal plants for thousands of years in the treatment of various diseases played a decisive role in the emergence of the term *ethnobotany*. Ethnobotanical sources, from antiquity to the present, provide rich information on the local names of these plants and their methods of use. Hittite inscriptions and Egyptian papyri are among the earliest written records concerning medicinal plants (Kendir and Güvenç, 2010).

Plants used in treatments are called 'medicinal plants'. A significant portion of medicinal plants are aromatic, narcotic, or poisonous. As cultivation of these plants increases, their yields will also increase. The sales problem for such plants is less than for other plants. Industrial medicinal plants, by their nature, are produced by contracting with a pharmaceutical company or institution, with a guaranteed purchase. This is particularly true for hemp (*Cannabis sativa*) and poppy (*Papaver somniferum*), which are raw materials for pharmaceuticals. The Turkish Ministry of Agriculture and Forestry is providing increased support to farmers producing medicinal and aromatic plants. Medicinal plants also have a high export potential.

Medicinal plants are used in various industries such as pharmaceuticals, food, beverages, perfumes, soaps, confectionery, cosmetics, toothpaste, chewing gum, teas, and essential oils. The consumption of aromatic medicinal plants has been increasing, particularly in the food, perfumery, and cosmetics sectors. The Lakes Region is rich in both medicinal and aromatic

plant species and possesses a favorable climate for their cultivation (Muca et al., 2012).

Ethnobotanical studies make significant contributions to both modern medicine and the cosmetics industry. Knowledge of the public's intended uses, the plants they use, and their methods of use is a definite source of inspiration for modern medicine. Scientific research demonstrates the validity of this notion. As pharmacological research based on ethnobotanical studies continues, the potential for plants to be used in the healthcare sector and for disease cures will increase. Ethnobotanical studies are the first phase of this process. Active substances isolated from medicinal and aromatic plants find application in the pharmaceutical and cosmetic industries. Isolated compounds are valuable raw materials for pharmaceuticals and are the precursors of modern synthetic drugs (Baytop, 1984; Gollapudi et al., 1995).

Within modern medicine, some researchers have raised criticisms of ethnobotanical research and its practitioners. These criticisms can be summarized as 'herbal extracts/preparations cannot replace modern, licensed drugs, and that non-physicians and those without medical training do not understand or administer treatment'. Although the criticism is partly justified, several scientific facts should also be considered: Folk medicine emerged out of necessity in rural areas where modern medicine was ineffective. It has no institutionalization or legal status in Türkiye. These are small-scale, daily practices, often within families. They are generally preventative and delay disease. They reduce the burden of modern medicine (Özçelik, 2022; Özçelik, 2023a,b). For example, dropping a few drops of breast milk into the ear of a baby with an earache, giving mint-lemon (*Mentha piperita* and *Citrus limon*) or fennel (*Foeniculum vulgare*) tea for gas during abdominal distension, feeding lemon or garlic buttermilk to someone with a sudden increase in blood pressure, squeezing lemon juice over warm honey sherbet and then giving it to someone whose voice suddenly becomes hoarse, applying thyme oil to a wound from an ingrown nail, applying St. John's wort oil and dressing the wound to an open wound, applying ammonia solution to the injured area of an organ in response to a bee sting, applying iodine tincture to treat skin infections, feeding or drinking molasses to someone with anemia, applying salt to a wound against infection, applying a plaster (usually bought from a pharmacy) or cupping the back of someone with a cold and infected lungs, making someone with food poisoning drink salt water and induce vomiting or sniffing an unpleasant-smelling herb, dropping organic rose (*Rosa damascena*) water into the eyes of someone with bloodshot eyes due to a foreign object, flushing the eyes with water to remove the foreign object, etc. Most of these are simple first-aid practices which do not replace medical examination or treatment, but rather save the patient time before reaching a physician or hospital. Such practices predate modern medicine and are known in almost every culture. Moreover, they cannot be legally prohibited (Özçelik, 2022).

Ethnobotanical research is not an alternative to modern medicine. It can only supplement modern medicine. Folk medicine is generally passed down from ancestor to son. Herbalist (attar in Turkish) is an example of this. Someone who is unfamiliar with plants, who does not know the harvesting season and where to collect them, who does not know how to dry them, and who does not understand their uses cannot be an 'attar'. The tradition of herbalism is the ancestor of pharmacy, and folk medicine is the ancestor of modern medicine. Presenting ethnobotanical research as a threat to modern medicine is the height of exaggeration.

In modern medicine, a 'medicine' is defined as an 'active substance'. A physician does not or cannot produce a drug; they simply administer it to the patient. They learn its ingredients and effects from other sciences. Considering the publications, congresses, and research projects on ethnobotany, it becomes clear that these concerns are unfounded. Science is universal and cannot be controlled by any individual or group. Knowing which plant is used for which disease and how, and the functions of its compounds in the living body, will make it easier to understand. Over time, the active substance can be isolated and transformed into a drug, contributing to modern medicine. It is important to recognize that many of the renowned physicians who contributed to global healing were not graduates

of medical schools, that medical students are expected to be familiar with these figures, and that modern medicine has benefited significantly from folk healers.

It is stated that folk medicine, even if it is based on practice, is based on the transmission of oral cultural products (Kardaş, 2019). Because the number of folk healers has decreased significantly today, the burden of modern medicine has increased. Furthermore, about 70-80% of people worldwide rely on traditional medicine as their main source of healthcare. This is the key issue that critics of ethnobotanical studies and those undermining folk healers should take into account. In Türkiye, until the Republican era, the prevailing form of practice was not modern medicine but traditional or folk medicine. Folk medicine represents an ancient, indigenous, and distinctive cultural heritage of the Turkish people. It embodies the accumulated knowledge and practices of earlier physicians and was primarily intended to serve humanity rather than commercial purposes. Its sources of inspiration and knowledge include The Tıbb-ı Nebevi (Prophetic Medicine), the works of renowned physicians such as Dioscorides, Galenos, Ibn Sina, Farabi, Lokman Hekim, Şerafettin Sabuncu, Hayatizade Mustafa Feyzi Efendi, and the Sufi physician Merkez Efendi, as well as the experiences of wars, palace physicians, shepherds, and livestock farmers (Özçelik, 2023b). Although folk medicine continues to exist today, it represents a historical stage in the evolution of medical knowledge. To understand our present, it is essential to acknowledge the path that has led us here. The contributions of folk healers, particularly during the Turkish War of Independence, should not be overlooked. As observed in Palestine and other conflict zones, when modern medicines and healthcare institutions are unavailable, communities often turn to medicinal plants and folk healers. Such experiences demonstrate that the persistence of folk medicine carries important lessons. Therefore, banning or disregarding folk medicine and herbal treatments risks not only erasing cultural heritage but also creating monopolies in the pharmaceutical and healthcare sectors.

Another important application of folk medicine is in the treatment of domestic animals. In rural contexts, when a sheep, chicken, or canary became ill, or when a horse grazing in the mountains suffered a broken leg, access to a veterinarian was often not possible. One of the major reasons for the recent decline in animal production in Türkiye has been the diminishing number of breeders and shepherds with traditional knowledge of animal diseases and care. Such experience in animal husbandry has frequently provided more reliable results than drug trials conducted solely on laboratory animals. However, due to rural-to-urban migration and rapid technological advancements, younger generations today are increasingly unfamiliar with the cultural heritage of using plants for healing or raising animals.

In Türkiye, certain folk medicine practices such as cupping and leech therapy (hirudotherapy) are now permitted to be performed by modern physicians. It is hoped that in the future, other practices such as apitherapy, aromatherapy, and halotherapy will also be integrated into clinical applications under professional supervision. Furthermore, herbal medicine supplements, including rosewater, carob molasses, pine cone molasses, marshmallow molasses, black cumin oil, thyme oil, and St. John's wort oil, are expected to be standardized and sold in pharmacies. For instance, a folk remedy produced in Isparta, commonly referred to as 'burn cream' is already available in some pharmacies and is well known and appreciated by the public. While folk medicine cannot be equated with modern medicine, its efficacy remains an important subject of scientific investigation and debate.

The Tıbb-ı Nebevi (Prophetic Medicine), along with the knowledge and experience of rural people, shepherds, and folk healers, served as the inspiration for compiling the list of medicinal plants and determining their methods of use (Şafii, 2025).

The naming of plants often conveys knowledge, wisdom, cultural associations, or historical narratives. Consequently, both plant names and their intended uses may vary across regions. In line with the principles of modern science, this article seeks to inspire new research by

identifying the medicinal plants of the Lakes Region and their methods of use, while also providing a brief literature review on women's healing practices to lay the groundwork for further studies.

MATERIALS AND METHODS

The study encompasses the results of a long-term period of observation and experience in the region. Interviews were conducted with local residents and livestock farmers; information obtained from their practices, as well as our own experiences, is reported in this article.

The region's medicinal plants have been collected, named, and preserved at the GUL Herbarium since 1994 year. The inventory of the region's medicinal plants (Table 1) was created based on literature and our own experience. Nearly all of the natural plants mentioned in this list are available at the GUL Herbarium, located within the Department of Biology, Faculty of Engineering and Natural Sciences of Süleyman Demirel University. However, field and herbarium records are not included in the article. Plants not used by the public but known to have medicinal purposes are also included in the list (Table 1). Numerical analyses and interpretations of the findings (Table 1) are provided in Tables 2-6; Fig. 1.

Abbreviations and methods used in preparing Table 1:
Herbal medicinal materials and plants procurement method:
A: Production from wild collection,
B: Imported ready-made product,
C: Domestic production from imported plants,
D: Domestic production from locally cultivated plants.

Scientific names in Latin and identification of medicinal plants (Table 1): They were identified and determined by us from the work titled Flora of Turkey and the East Aegean Islands (Davis 1965-1988).

Medicinal plants used in the region and their classification (Table 1): One of the following symbols is placed to the left of the plant names in the list. This symbol provides information about the plant's origin and other known properties. 1*: Aromatic plant; 2*: Poisonous or narcotic plant; 3*: Forest tree; 4*: Dye plant; 5*: Other plants (fruit tree, weed, cultivated, etc.).

Harvest period of medicinal plants in the region (Table 1): The month when the organ of the plant to be used for medicinal purposes should be collected from nature/field is specified (4th month: April, 8th month: August, etc.).

English and Turkish Names of Medicinal Plants (Table 1): The most common local names of the species/taxons are listed in order of importance. The Turkish name of the plant was chosen from the Lakes Region; those whose names were unknown were named according to the literature (Özçelik, 2022; Fakir et al., 2009; Baytop, 1994), and the English name was written according to the literature.

Used parts of medicinal plants (Table 1): The parts used (root, rhizome/tuber etc.), trunk, wood, leaf, flower/cone, inflorescence, fruit/fruit peel, seed, resin/balsam/gum/sap, etc.) are described, and if more than one organ is used, the organs are listed in order of importance.

Using Purpose of medicinal plants (Table 1): Diseases or properties for which the plant is used in the region are listed in order of importance. Disease names given by local people were used as a basis.

All poisonous and aromatic plants, whether used therapeutically or not, are potential medicinal plants. However, in preparing the Lakes Region's medicinal plant inventory, poisonous plants whose use is unknown to the public or whose use is considered too dangerous were not included on the list. All members of the Asclepiadaceae/Apocynaceae, Ranunculaceae, Caryophyllaceae, Araceae, and Solanaceae families are poisonous. Folk healers generally avoid using poisonous and narcotic plants.

Methods of using medicinal plants (Table 1):
1. Drinking the oily water of the plant obtained through distillation or cold pressing,
2. Drinking the essential oil of the plant obtained through distillation,

Figure 1: Topographic map of the Lakes Region (Türkiye) (Coordinate: 38°2′52″N 30°59′12″E).

3. Using the product obtained from the plant internally (e.g., making it into food, tea, molasses, vinegar, eating/drinking it; eating it raw, adding some of it to water and letting it steep for 10 minutes before drinking it, or gargling),
4. Applying it externally to the body/wrapping it (applying, sniffing, or inhaling the plant's cream, powder, sap, or tar, wrapping a plaster around the body, etc.),
5. Chewing the plant's gum (made from its resin/sap),
6. Using the plant's tar (applying tar obtained from the wood by burning it and applying it to the skin),
7. Making soap from the plant for medicinal purposes. This soap is used directly or by adding it to bathwater.
8. The plant's gum, balm, etc., is used by burning embers in a fire and inhaling or smelling the smoke.
9. There is no clear information regarding the plant's medicinal use.

Table 1a. Some information on medicinal plants used by local people in the Lakes Region (Fungi)

Name in Latin	Name in English/ Turkish	Using part/parts	Harvest date (as a mount)	Purpose of use	Procurement and usage
Agaricus bisporus	…../ Kültür Mantarı	Fruitification part	4-6 (-12)		A, D: 3
Boletus edulis	Bolet mushrooms,	Fruitification			

	Porcini/ Ayı Mantarı	part	4-6 (-12)	It is rich in vitamins and minerals.	A: 3
Hydnum repandum	Hedgehog mushrooms / Sığır Dili Mantarı	Fruitification part	4-6		A: 3
Lactarius delicious	Lactare mushrooms /Melki, Çıntar, Kanlıca Mantarı	Fruitification part	4-6		A: 3
Morchella conica	Morel mushrooms / Kuzugöbeği	Fruitification part	4-6	Squeeze the sap of the plant and apply a few drops against eye pain.	A: 3
Morchella esculenta	Morille mushrooms / Kuzugöbeği	Fruitification part	4-6		A: 3
Pleurotus ostreatus	Oysterm mushroom / İstiridye mantarı, Raf mantarı	Fruitification part	4-6(-12)	It is rich in vitamins and minerals.	A, D: 3
Tuber albidum	White truffle/ Domalan mantarı	Fruitification part	4, 9(-10	It is rich in vitamins and minerals. Against cholesterol and high blood sugar.	A: 3
Tuber melanosporum	Periord Truffle/ Siyah domalan	Fruitification part	4, 9(-10)	It is rich in vitamins and minerals Against cholesterol and high blood sugar.	A: 3

Table 1b. Some information on medicinal plants used by local people in the Lakes Region (Pteridophyta)

Name in Latin	Name in English/ Turkish	Using part/parts	Harvest date (as mount)	Purpose of use	Procurement and usage
2**Adiantum capillus-veneris*	Maidenhair fern/ Baldırıkara, Venüssacı	Aboveground parts	9-11	In the treatment of kidney stones, urinary system infections, chest pains and coughs. A (strengthening) syrup called 'Baldırıkara in Turkish' is made and drunk; against psychiatric diseases.	A: 3-4
2**Ceterach officinarum*	Common pleenwort, Miltwaste/ Altınotu, Mayasılotu	Aboveground parts	5(-6)	Diuretic, anti-yeast.	A: 3-4
2**Dryoptris filix mas*	Male fern/ Solucan eğreltisi	Whole plant	9-11	Against intestinal parasites such as worms and tapeworms.	A: 3-4
2**Equisetum* spp.	Horstail/ Atkuyruğu Kırkkilitotu	Whole plant	9-11	Anti-rheumatic, bone strengthening, diuretic.	A: 3-4

2**Lycopodium clavatum*	Club Moss/ Kibritotu	Aboveground parts	9-11	To relieve stomach gases.	A: 3-4
2**Pteridium aquilinum*	Eagle fern, Bracken/ Kartal eğreltisi	Whole plant	9-11	Internally against intestinal parasites such as worms and tapeworms.	A: 3-4
2**Polypodium vulgar*e	Kaya eğreltisi	Whole plant	9-11	Against sleep disorders.	A: 4

Table 1c. Some information on medicinal plants used by local people in the Lakes Region (Gymnospermae)

Name in Latin	**Name in English/ Turkish**	**Using part/parts**	**Harvest date** (as a mount	**Purpose of use**	**Procurement and usage**
1* *Abies* spp.	Fir/ Göknar, Köknar, İledin	Shoots and Resin	5 (-10)	Stomach disorders and infectious diseases.	A: 1-2; 4-5
1* *Cedrus libani*	Cedar/ Sedir, Katran ağacı	Wood, Resin and Cones	5 (-10)	Infectious diseases, insect repellent and feather enhancer.	A: 1-7
3**Cupressus sempervirens*	Cypress/ Servi, Andız	Wood and Cones	5(-8)	Pest repellent, against infection.	A: 1-3, 6, 7
2**Ephedra major* etc.	Ma huang/ Deniz üzümü, Ulama	Cones	9 -11	Stimulant, used in the treatment of lung and heart diseases.	A: 4, 9
Ginkgo biloba	Maidenhair tree/ Mabed ağacı	Cones and Leaves	10-12	It strengthens the immune system. It accelerates blood flow. It is beneficial against lung infections.	D: 1-2
3* *Juniperus communis, J. foetidissima* etc.	Juniper/ Ardıç, Adi Ardıç, Yağ ardıcı, Kokulu ardıç	Cones, fresh shoots and wood	7-9 (-11)	Against infectious diseases, insect repellent and hair growth enhancer; against respiratory system disorders.	A: 1-2; 4-6
1* *Juniperus drupacea*	Syrian juniper/ Andız, Enek	Cones	7-9 (-11)	Immune system booster.	A: 1-4
1**Pinus* spp.	Black pine/ Karaçam, Kızılçam, Sarıçam, Fıstık çamı	Seeds, Resin, Wood, Fresh Cones and Shoots	4(-10)	Stomach disorders, infection, rheumatic diseases, against cancer; immune system strengthener; pest repellent; cone molasses, hydrol; essential oil and turpentine.	A: 1-6
5**Thuja orientalis*	Sandaraca/ Mazı, Şahin ardıcı	Cones	4-6, 9-10	Infectious diseases, insect repellent and feather enhancer.	C: 1-7

Table 1d. Some information on medicinal plants used by local people in the Lakes Region (Liliopsida)

Name in Latin	Name in English/ Turkish	Using part/ parts	Harvest date (as a mount)	Purpose of use	Procurement and usage
1**Acorus calamus*	Sweet Sedge, Sweet Flag/ Eğirkökü, Hazanbel	Rhizomes	10-12	Pain reliever, muscle relaxant.	A: 8
2* *Alisma plantago - aquatica* etc.	Alisma, Water plantain/ Susinirliotu	Rhizome, stem, leaf	5(-12)	Wound healing, against liver and spleen diseases.	A: 3, 8
1* *Allium cepa*	Onion, Bulb/ Soğan	Whole plant	5(-6)	Against infectious diseases, poisoning, earache, ulcers, hemorrhoids, skin problems; strengthening the body; regulating menstrual pains, diuretic, blood thinner, nasal opener.	D: 1, 3
1**Allium sativum*	Garlic, Bulb/ Sarımsak	Whole plants	5(-6)	Against infectious diseases and intestinal worms, appetite stimulant; blood pressure lowering and strengthening, for cardiovascular health; antiseptic, appetite stimulant; against earache and styes (large pimples in front of the eye) and skin diseases.	D: 1, 3-4
1**Allium scorodoprasum* subsp. *rotundum* etc.	Bear's Garlic/ Körmen, Ayı Sarımsağı	Whole plant	5(-6)	Against infectious diseases; strengthening, blood pressure lowering; for cardiovascular health.	D: 1, 3
1**Alpinia officinarum*	Lesser Galangal, Havlıcan	Rhizomes	-	Against urinary incontinence and infectious diseases and to strengthen the body.	B: 3
1**Ananas comosus*	Pineapple/ Ananas	Meyve	-	Strengthening and appetite stimulant.	B: 3
2**Arum* spp.	Arum/ Yılan yastığı, Yılan burçağı	Whole plant	5(-6)	Antipyretic, stomach cleanse.	A: 3
1 **Asparagus officinalis, A. acutifolius*	Garden Asparagus/ Kuşkonmaz	Rhizomes and fresh shoots	5(-6)	Strengthening.	D: 1, 3

1**Aspholedus aestivus*	Summer asphodel/ Çiriş otu	Lower leaves, Above ground part and rhizomes	5(-6)	Strengthening.	A: 3
5* *Avena sativa*	Oat / Yulaf	Fruit, Seed	5(-6)	Soothing the digestive system.	D: 1, 3
1**Cocos nucifera*	Coconut/ Hindistan cevizi	Fruit, Seed	-	Strengthening the body.	B: 1, 3
1**Crocus sativus*	Saffron/ Safran	Stilus	10(-11)	Strengthening, sedative.	D: 1, 3
5**Cynodon dactylon*	Couch grass/ Ayrık	Rhizomes	7-9	Diuretic.	A: 3-4
Dactylorhiza spp.	Salep, Orkid/ Orchid	Tubers	10-12	Keeps the stomach full and prevents gynecological diseases.	A: 3-4
2**Ginkgo biloba*	Ginkgo/ Mabet Ağacı	Leaf, Fruits	8(-10)	Against heart diseases.	C: 3
5**Hordeum vulgare*	Barley/ Arpa	Fruits	5(-6)	For the treatment of rheumatism.	D: 3-4
*2*Iris germanica* etc.	Orris, Flag/ Süsen, Zambak	Rhizomes and flowers	10 (-11)	The scent is relaxing and soothing to the nerves.	A, D: 1, 4
5**Musa paradisiaca*	Banana/ Muz	Fruits	-	Source of minerals such as magnesium; for muscle health; gives a feeling of satiety.	D: 3
1**Ophyris* spp.	Blum, Bee Orchid/ Salep	Tubers	10(-11)	Keeps the stomach full and prevents gynecological diseases.	A: 3
5**Opuntia ficus-indica*	Prickly pear, Indian fig opuntia, Barbary fig / Kaynana dili, Frenk İnciri	Fruits	10(-11)	Against sugar, cholesterol and obesity.	A: 1, 3
1**Orchis anatolica* etc.	Orchid/ Salep	Tubers	10(-11)	Keeps the stomach full and prevents gynecological diseases.	A: 3
5* *Oryza sativa*	Brown rice/ Çeltik, Pirinç	Seeds	8-9	Digestive, appetite stimulant.	C: 3
5**Panicum miliaceum*	Millet/ Akdarı, Darı, Cimcime	Seeds	7-8	Facilitates digestion and nourishes the body.	D: 3
5* *Phoenix dactylifera*	Date palm/ Hurma	Fruits	-	Antioxidant and anti-inflammatory. In the treatment of cancer, heart diseases, diabetes, obesity.	B: 3
2**Polygonatum orientale*	Solomon's seal / Mührü süleyman	Rhizomes	10(-11)	Immune system booster, against cancer, heart failure and high blood sugar.	C: 1, 3, 4

2**Ruscus aculeatus*	Butcher's Broom, herb/ Tavşan memesi	Whole plant	10(-11)	The cream is applied to the skin and tightens the skin and relieves redness.	A: 1, 4
5**Smilax exelsa*	Sarsaparilla/ Gıcır, Saparna, Çöpçini	Rhizomes and fruits	8-10	To increase joint fluid in the knees, therapeutic, nutritious, blood-building.	A: 3-4
2**Sorghum bicolor*	Grain sorghum Black amber Akdarı, Cimdarı	Seed	6-7(-8)	Digestive enhancer, appetite stimulant.	D: 3
5**Triticum vulgar*e etc.	Wheat/ Buğday	Seed	6-7	Wheat bran is very beneficial for health.	D: 3-5
2**Urginea maritima*	Sea onion / Ada soğanı	Bulbs	2-3	Heart strengthener.	A: 1-4
5**Vanilla fragrans*	Vanilla pods, Vanilla beans/ Vanilya	Fruit and seed	?	Strengthening the body, calming.	B: 3
5* *Zea mays*	Cornsilk/ Mısır, Kocadarı	Tassels and fruits	6-7(-9)	Against urinary tract disorders; its fruits facilitate digestion and stimulate appetite.	D: 3
5* *Zingiber officinale*	Ginger/ Zencefil	Rhizomes	-	Against infectious diseases and strengthening the immune system	B: 1-3

Table 1e. Some information on medicinal plants used by local people in the Lakes Region (Magnoliopsida)

Name in Latin	Name in English/ Turkish	Using part/parts	Harvest date (as mount)	Purpose of use	Procurement and usage
5**Abelmoschus esculentus*	Okra/ Bamya	Flower, Fruit, Seed	5(-9)	In the treatment of joint fluid deficiencies and rheumatism	D: 3-4
2**Achillea millefolium, A. biebersteinii* etc.	Yarrow/ Civanperçemi, Ayvedana	Inflorescescence	5(-6)	Against nausea and headache; pain reliever and stopper of bleeding; diuretic, appetite stimulant, carminative, wound healing etc.	A: 3, 4
5**Actinidia chinensis* var. *deliciosa*	Kiwi/ Kivi	Fruits	8-9(-10)	Immune system booster; nourishes eye cells.	C: 3
2**Aesculus hippocastanum*	Horse-Chestnut/ At Kestanesi	Bark, Leaves, Fruit, Seed	5(-6)	Against hemorrhoids, coughs and	C: 4

				rheumatism; antitumor and pain reliever.	
2**Agrimonia eupatoria*	Agrimony/Koyunotu, Fıtıkotu	Above ground parts	5(-6)	Against diarrhea; carminative; in psychiatric diseases.	A: 3, 7
2**Alchemilla vulgaris* etc.	Ladies mantle/ Aslanayağı, Fındıkotu	Above ground parts	5(-6)	Against hypertension.	A: 3, 7
1**Ajuga chamaepitys* etc.	Ground Pine, Bugle/ Mayasılotu, Kısamahmut	Above ground parts	5(-6)	Against nausea, jaundice, liver diseases, urinary system disorders; pain reliever; wound healing.	A: 3, 7
1**Althea officinalis, A. rosea* etc.; *Alcea* spp.	Marshmallow/ Hatmi, Gülhatmi	Leaves, Roots and Flowers	5(-8)	Chest softener, against infection and lung (cancer etc.) diseases; digestive and excretory system disorders.	A: 3, 7
1**Ammi visnaga*	Khella, Tooth Pick/ Hıltan, Dişotu, Kürdan	Above ground parts	5(-6)	Against bad breath, high blood sugar, infectious diseases, menstrual disorders, and urinary tract infections; increases cell membrane permeability; regulates menstruation, and combats skin pallor, insect bites, and urinary tract infections.	A: 3, 7
5* *Amydalus communis*	Almond/ Badem, Payam	Seed and Balm	8-9	Laxative and stomachic. Against hair loss, inflammatory skin diseases, sunspots and infertility; menstrual stimulant; cough suppressant.	D: 1-5
Anagallis arvensis	Scarlet pimpernel /Fare kulağı	Above ground parts	4-7	Sinusitis reliever, headache, toothache, eye diseases.	A: 3-4

4* *Anchusa azurea*	Bugloss/ Sığırdili	Above ground parts	5-8	As a blood thinner; in the treatment of burns and jaundice, against skin n infections.	A: 3, 4
1**Anethum graveolens*	Dill/ Dereotu	Above ground parts	5(-6)	Against bad breath, gum disease, and infectious diseases; appetite stimulant, stomachic, and milk enhancer. Against gum problems, joint pain, and soothing.	D: 3, 4
1**Angelica archangelica*	Angelika/ Melekotu	Root	5(-6)	Antispasmodic, carminative, diaphoretic; diuretic and expectorant; against psychiatric diseases.	C: 3, 7
1* *Angelica sylvestris*	Wild Angelica/ Yabani Melekotu	Root and frıuits	5(-6)		A: 3, 7
1* *Anthemis nobilis* etc.; *Tanacetum* spp.	Camomile/ Papatya	Flower, Aboveground parts	5(-6)	Sedative, against hair and skin diseases and rheumatism; in the treatment of colds, flu, jaundice; antitussive, gallstones, jaundice cystitis, sedative.	A: 3, 7
1**Apium graveolens*	Celery, leaves/ Kereviz	All plant	5(-6)	Against liver diseases.	D: 3
5**Arachis hypogaea*	Peanut, ground nut/ Yer fıstığı	Seed	5(-6)	Against mineral deficiency.	D: 3
2**Arctium majus* etc.	Burdock/ Dulavratotu	Above ground parts	5(-6)	It is beneficial for kidney health and lowering blood sugar.	A: 7
Aristolochia spp.	Birthwort/Lohusaotu, Kabakulak, Karga keleği	Above ground parts	5-8	It is used as a heart strengthener, to dilate blood vessels, during childbirth, as a menstrual expectorant, as a diaphoretic, antipyretic and anti-inflammatory, for insect bites, blisters (edema) and wound healing and as an emetic.	A: 3-4

5**Aronia melanocarpa*	Aronia/ Aronya	Flowers/Fruit	7(-8)	Against high blood sugar and vitamin C deficiency.	C: 3
2* *Artemisia absinthium* etc.	Common Wormwood/ Pelinotu, Acı yavşan	Above ground parts	5(-6)	Anti-nausea and pain reliever.	A: 3
1* *Astragalus microcephalus* etc.	Tragacanth/ Geven	Whole plant	8(-10)	Very important for animal nutrition and health; valuable in the production of gum tragacanth and astragalus honey.	A: 3, 5
1* *Ballota nigra*	Black horehound/ Köpekotu, Kara yer pırasası	Above ground parts	5(-6)	Antiulcer, antispasmodic and sedative.	A: 3, 4, 7
4**Berberis* spp.	Barberry /Kadın tuzluğu, Karamuk	Fruit, Rhizome and Bark	8(-9) 11(-02)	Against high blood sugar, as a condiment for foods like rice, etc., and as an appetite enhancer.	A, C: 3, 9
4**Borago officinalis*	Borage/ Hodan	Above ground parts	5(-6)	Appetite stimulant; against stomach disorders; diuretic, diaphoretic, blood purifier.	A: 3
1**Boswellia serrata*	Olibanum / Akgünlük	Balsam and balsam extract	-	Disinfectant against forgetfulness and infectious diseases.	B: 8
5**Brassica oleracea*	Cabbage/ Lahana	Whole plant	5(-6)	For weight loss; Vitamin D source.	A: 3
5**Calendula officinalis, C. arvensis*	Marigold/ Aynısafa	Flowers	5(-6)	Against colds, infectious diseases with fever, hemorrhoids and stomach cramps.	A, D: 1-4
2**Calluna vulgaris*	Heather/ Süpürge çalısı	Flower, Leaf, Whole plant	5(-6)	It is very important in the production of honey for medicinal purposes. It is used against kidney stones and urinary tract disorders.	A: 1-4
4**Cannabis sativa*	Hemp/ Kenevir, Kendir	Seed	7(-8)	Sedative, against nausea and vomiting, cancer, MS, etc.	A: 3
2**Capparis ovata, C. spinosa*	Cappary/ Kapari, Kebere, Gebere otu	Flower bud, flower, fruit and seed	6(-9)	Against MS disease; strengthens the body.	A: 3

1**Capsella bursa-pastoris*	Shepherd's purse/ Çoban Çantası	Above ground parts	5(-6)	Against urinary tract diseases.	A: 1-3
5**Capsicum annuum*	Paprika, Cayenne pepper / Acı Biber	Fruits	6(-9)	It increases blood circulation and is used as a raw material in making appetite stimulants and plasters.	D: 1-3
5**Carthamus tinctorius*	Safflower/ Aspir	Flowers ans seeds	5(-7)	Its oil is used for medicinal purposes.	D: 1-4
1**Carum carvi*	Caraway/ Kimyon	Seed	5(-7)	It is added to foods as an appetite stimulant and flavor enhancer.	D: 1-4
2**Cassia angustifolia*	Senna/ Sinameki	Leaves	-	Diuretic, cleanser for eye inflammations; laxative and against bowel irregularities.	B: 1-3
2**Cassia fistula*	Purging Cassia tree/ Hiyarşembe	Fruit, Seeds and Stem Bark	-	To remove toxins from the body; against psychological disorders.	B: 3
5**Castanea sativa*	Chestnut/ Kestane	Fruit, Seed, Male Inflorescence	9-10	Against colds, flu and throat infections, knee pain, lung diseases and cancer.	A, D: 3, 4
3**Ceratonia siliqua*	Carob/ Keçiboynuzu, Harnup, Buynuz	Fruits	8(-10)	Against jaundice and liver diseases; strengthening, immune system booster.	A: 3
Chenopodium album	Lamb's quarter/ Sirken, Akpazı, Kazayağı	Leaves	4-6	Against heartburn.	A: 3-4
5**Cicer arietinum*	Chick pea/ Nohut	Seed	6(-7)	It keeps you full and is highly nutritious. It is important for intestinal health.	D: 3
4**Cichorium intybus*	Chicory/ Hindiba	Root, Fresh shoots	5-7(-9)	Its fresh seedlings and leaves are used to treat high blood sugar levels; its seeds are used to make coffee for medicinal purposes.	A: 3
4**Cinchona succirubra*	Cinchona/ Kınakına	Bark	-	Against heart pain and palpitations;	B: 1-3

				antipyretic; also malaria and fatigue.	
4**Cinnamomum cassia* etc.	Cinnamon/ Çin Tarçını	Bark	-	Against infectious diseases; appetizer, flavoring food.	B: 1-3
Cistus spp.	Marigold/ Karağar Pamuklukotu, Laden,	Flowers and leaves	4-6	Keeping blood sugar balanced.	A: 1-3
Cirsium arvense	Creeping thistle/ Köygöçüren, Deve dikeni	Leaves, Roots and Flowers	4-8	Coffee is made for medicinal purposes to keep blood sugar balanced.	A: 1-4
5**Citrus aurantium*	Bitter Orange, Sour orange/ Turunç	Flower, Fruit, Fruit peel, Leaf	8-10	The extract is used for medical purposes.	D: 1-3
5**Citrus bergamia*	Bergamot / Bergamut	Fruit peel	-	The essential oil or aroma of the peel is used against car sickness and colds; against psychological problems.	B: 1-4
5**Citrus limon*	Lemon/ Limon	Fruits, Fruit peel	9(-10)	The aroma of the bark is against car sickness, high blood pressure and joint rheumatism.	D: 1-3
5**Citrus nobilis* var. *deliciosa*	Mandarin Orange/ Mandalina, Mandarin	Fruit peel	9(-10)	Its essential oil is a medicinal material.	D: 1-3
5**Citrus sinensis*	Oreange/ Portakal	Flower, Leaf, Fruit and its Peel	8(-10)		
4**Cnicus benedictus*	Holy Thistle, Blessed Thistle/ Mübarek dikeni, Şevketibostan	Above ground parts	5(-6)	Ever reducer, immune system booster, appetite enhancer, diarrhea suppressant, diuretic, liver cleanser, etc.	A: 3
1**Coffea arabica*	Coffee tree / Kahve ağacı, Kahve	Seed	-	Concentrator, metabolism accelerator, diuretic and anti-diarrheal.	B: 3
1**Coriandrum sativum*	Coriander/ Kişniş	Leaves and Flowers and Seed	6(-7)	Against infectious diseases; appetite stimulant, food flavoring; psychiatric diseases.	D: 1-4
4**Cornus mas*	Cornelian Cherry/ Kızılcık, Ergen	Fruit, Seed	8-10	Against lowering blood sugar, antipyretic, throat infection, blood	A, D: 3-4

				purifier, for intestinal health.	
1**Corydothymus capitatus*	Thyme/ Kara kekik	Above ground parts	6(-9)	Against infectious diseases and abdominal distension (stomach gas); appetite stimulant, flavoring food.	A: 1-4
5**Corylus avellana*	Hazel/ Fındık	Seed	8(-9)	Heart health, insect bites, and the evil eye Source of minerals.	D: 3-4
2**Cotinus coggygria*	Smoketree/ Duman ağacı	Leaf and Inflorescescence	5(-6)	Anti-diarrhea, acne and boil prevention.	A: 3, 4
5**Crataegus* spp.	Hawthorn/ Alıç, Yemişen	Flower, Fruit and Leaf	6(-9)	Heart strengthener; the vinegar of its fruits is a medicinal material. Sexual potency enhancer.	A: 3
5**Cucumis melo*	Melon/ Kavun	Fruits	6(-10)	Diuretic, blood pressure lowering and kidney health.	D: 3
5**Cucurbita* spp.	Pumpkin/ Bal Kabağı, Sakız Kabağı, Kestane Kabağı	Fruit, Seed, Flower	5(-9)	For intestinal and stomach health; against intestinal parasites.	D: 3
4**Cuminum cyminum*	Cumin/ Kimyon	Fruit, Seed	5(-6)	Against infectious diseases; appetite stimulant; flavoring food.	D: 3-4
1**Curcuma longa*	Turmeric/ Zerdeçöp, Zerdeçal	Rhizomes	-	Against infectious diseases; appetite stimulant; flavoring food.	B: 1-3
2**Cyclamen* spp.	Cyclamen/ Topalak, Domuzturpu, Siklamen	Tubers	10-12	Against hemorrhoids, eczema and intestinal worms.	A: 3-4
5**Cydonia oblonga*	Quince/ Ayva	Fruits, Leaves, and Flowers	10-11	Against cold, flu, cough, bronchitis, throat infection and stomach ache, sinusitis and cancer; chest softener.	D: 1-4
5**Cynara scolymus*	Artichoke/ Enginar	Inflorescescence	10-11	Antimicrobial, antioxidant.	D: 3, 4
1**Daucus carota*	Carrot/ Havuç	Seeds, Storage roots	5(-6)	An aromatic plant rich in carotene.	A: 1-4
2**Datura innoxia, D. stramonium*	Sacred datura, Downy thorn apple, Thorn-apple/ Tatula,	Above ground parts	5(-6)	Antifungal, antioxidant.	A: 1-3

	Boru çiçeği				
5**Diospiros kaki*	Japanese persimmon/ Amma, Cennet elması	Fruits	9-10	Against to cancer; for intestinal health.	C: 3, 4
5**Echinacea* spp.	Echinacea/ Ekinezya	Whole plant	8-10	Against infectious diseases; appetite stimulant	B, C: 3, 4
1**Echinophora* spp.	Tarhana Herb/ Çörtükotu, Çördük, Tarhana otu	Above ground parts	6-10	Against infectious diseases and stomach ulcers; appetizer, flavoring food.	A: 1-4
3***Elaeagnus angustifolia*	Russian olive, Elaeagni/ İğde	Flowers and fruits	5-6; 8-9	Against infectious diseases and fluid loss in joints; appetite stimulant, flavoring food.	A, D: 1-4
4**Elettaria cardamomum*	Cardamom/ Kakule	Fruits	-	Against infectious diseases, appetizer, flavoring food.	B: 1-4
1**Eleutherococcus senticosus*	Siberian ginseng/ Ginseng	Root	-	Against infectious diseases,	B: 1-4
4**Epilobium* etc.	Willow herb/ Yakıotu	Above ground parts	5(-6)	Plaster is made against colds and infectious diseases.	A: 4
4**Eryngium campestre* etc.	Eryngo, Sea holly/ Boğadikeni, Çakırdikeni	Above ground parts, roots	5-8	For oral, dental and digestive system health.	A: 1-4
4**Eucalyptus camaldulensis*	Ökaliptus/ Sıtma ağacı	Leaves, trunk barks	5-8	Against infectious diseases.	D: 1-4
1**Eugenia caryophyllata*	Clove/ Karanfil	Flower Buds	5-8	Against infectious diseases; appetite stimulant; food flavoring; bad breath remover.	D: 1-4
2**Ferula* spp.	Gigant fennel /Çakşırotu, Çakşır	Above ground parts	5(-6)	It is added to foods for medicinal purposes, against infertility; aromatic and antimicrobial.	A: 1-4
5**Ficus carica*	Fig tree/ İncir, Yemiş	Fruit and Leaves	7-9	For intestinal health; against poisoning and calluses; strong nutrient.	A, D: 3, 4
1**Foeniculum vulgare*	Florence Fennel/ Tatlı Rezene	Fruit, Seed	5(-6)	Against infectious diseases; appetite stimulant, food flavor enhancer, cell membrane permeability enhancer.	A: 1-4

5**Fragaria vesca*	Strawberry/ Çilek	Fruit, Leaves	5(-11)	Source of vitamin C.	A: 1-3
3**Fraxinus ornus, F. excelsior*	Manna Ash/ Dişbudak, Şimşir	Leaf, Wood	5(-11)	Against diabetes; tablespoon raw material.	A: 4
2**Fumaria officinalis*	Fumitory/ Şahtere	Above ground parts	5(-6)	Against nausea; pain reliever and against infectious diseases.	A: 3
2**Galega officinalis*	Goat's Rue/ Keçisedefotu	Above ground parts	5(-7)	Kidney health and diabetes treatment.	A: 3
2**Galium aparine* and *G. verum*	Cleavers/ Yoğurtotu	Above ground parts	5(-7)	Diuretic, kidney and lymphatic health.	A: 3
2**Glycyrrhiza glabra*	Licorice/ Meyan	Rhizomes	8(-10)	Drink sherbet to relax, against stomach problems.	A: 3-4
5**Gundelia tournefortii*	Gum/ Kenger, Kangal	Plant sap, seed	4-5; 8-10	Its gum is used against digestive system disorders and bad breath; its seeds are used in making coffee for medicinal purposes.	A: 3-5
Gypsophila arrostii var. *nebulosa* etc.	Beyşehir soapwort/ Beyşehir çöveni	Plant sap, roots	9-11	Stomach cleanser, appetite stimulant, anti-cancer?	A, D: 3-4
Hedera helix	Ivy / Sarmaşık, Karayaprak	Whole plant	9-12	Against constipation.	A: 1-3
5**Helianthus annuus*	Sunflower/ Ayçiçeği Gözotu, Sımışka Çekirdek, Şemame	Flower, Seed, Plant Sap	5(-6)	Contains high levels of fatty acids, vitamins, and minerals.Antioxidant, anti-cancer, anti-fungal, anti-inflammatory, and anti-microbial.	D: 3-4
5**Helianthus tuberosus*	Artichoke/Yer Elması	Tubers	8(-10)	Against diabetes.	D: 3
1**Helichrysum* spp.	Sandy Everlasting/ Altınotu, Ölmez Çiçek	Inflorescescence and Flowers	5(-6)	Sedative and against urinary tract disorders.	A, D: 1-4
2**Herniaria glabra* etc.	Rupturewort, Hairy Burstwort/ Kasıkotu	Above ground parts	5(-9)	Against inguinal hernia.	A: 4
5**Hibiscus syriacus*	Hibiscus/ Ağaçhatmi	Flowers	5(-6)	For the health of organs such as heart, liver, lungs, etc.	C: 1-4
2**Hippophae rhamnoides*	Sea Buckthorn Seaberry/ Yalancı İğde	Fruits	7-9	Against eczema, stomach diseases, colds and burn wounds.	A: 1-4

2**Humulus lupulus*	Hops/ Şerbetçiotu	Inflorescescence	8-9	Appetite stimulant, diuretic, sedative; used in syrups against insomnia and poisonous animals.	A: 3-4
2**Hypericum perforatum* etc.	St. John's Wort/ Binbirdelik Otu / Sarı Kantaron	Above ground parts	5(-6)	As a wound healer.	A: 3-4
1**Hyssoppus officinalis*	Hyssop/ Zufaotu, Çördük	Above ground parts	5(-6)	It is used against throat inflammations, carminative, stimulant and stomach diseases; cough, lung, digestive and chest disorders, intestinal diseases, etc.	A: 3-4
2**Inula helenium*	Elecampane/ Andızotu	Rhizomes	8(-11)	Against kidney and stomach disorders; against urinary difficulties in pets.	A: 3-4
2**Inula viscosa*	Elecampane/ Sümenit	Above ground parts	8(-11)	Expektoran, terletici ve antibakteriyel; iç parazitlere karşı.	A: 1-4
2**Jasminum officinale* etc.	Jasmine/ Yasemin	Flowers	5(-6)	It has a sedative effect. It is added to foods for flavoring.	D: 1-4
2**Juglans regia*	Walnut/ Ceviz	Leaves, Fruits	8-9	Strengthens brain functions; against heart disease, cholesterol, hand and foot fungus.	A, D: 1-4
2**Lactuca sativ*a etc.	Lettuce, Wild lettuce/ Sütlükotu	Above ground parts	5(-6)	In reducing sleep disorders and psychological disorders.	A: 1-4
2**Laganeria siceraria*	Gourd, Vine Gourd / Sukabağı, Asmakabağı	Fruits	8(-11)	Against cancer; disinfectant.	D: 3-4.
2**Luffa cylindrica*	Loofah / Lif kabağı	Fruits	8(-10)	Organic medical grade fiber for the bathroom.	D: 4
1**Lamium* spp.	Dead Nettle, White Nettle/ Ballıbaba	Flowers	4-10	Antioxidant, astringent, muscle relaxant, antimicrobial.	A: 1-4
5**Laurocerasus officinalis*	Cherry laurel, laurel cherry/ Taflan, Laz	Fruits	8(-9)	Against high blood sugar and headaches; stomach	A, D: 3

	Yemişi, Karayemiş			soothing; source of vitamin C.	
1**Laurus nobilis*	Bay, Laurel/ Defne, Tehnel	Leaves and Fruits	5(-6)	Against dandruff in hair; spice, moth repellent; psychiatric diseases.	A: 1-4
1**Lavandula angustifolia*	Lavender/ Lavanta	Flowers	5(-6)	Against nausea and nervousness; pain reliever, sleep-inducing, muscle relaxant.	D: 1-4
1**Lavandula L. cariensis, L. stoechas, L. x intermedia* etc.	Casssidony/ Karabaş Out, Lavanta	Inflorescescence	5(-6)		
1**Lepidium sativum*	Garden cress / Tere	Fresh all plant parts	5(-6)	Nausea reliever, appetite stimulant	D: 1-4
2**Linaria vulgaris* etc.	Toad Flax/ Nevruzotu	Above ground parts	4(-6)	Blood purifier, carminative, expectorant.	A: 3-4
2**Linum usitatissimum*	Linseed, Flax/ Keten	Seed	5(-6)	For digestive system health.	A: 3-4
1**Lippia citriodora*	Lemongrass/ Limon otu	Leaves	5(-6)	Adding aroma/ flavor to liquid foods such as tea and as an appetite stimulant; lowering blood pressure; accelerating metabolism.	C: 3-4
1**Liquidambar orientalis*	Styrax/ Günlük, Sığla Ağacı	Balsam, frankincense and oil	5(-6); 8-9	Memory enhancer, antioxidant, insecticide, parasite and fly repellent, wound healer, brain and nervous system protector	A: 1-8
2**Lupinus* spp.	Lupen/ Termiye, Tirmis, Acı Bakla	Seed	7(-9)	It is a food very rich in protein.	D: 3
2**Lycium barbarum*	Lisiyum/ Gojiberi, Goji	Fruits	-	It shortens the treatment period. It strengthens the body's resistance against diabetes and cancer.	C: 3-4
2**Lycopersicon esculentum*	Tomato/ Domates	Fruits	5(-10)	It is a source of lycopene. It increases the body's resistance to cancer. It increases blood production.	D: 4-10
2**Maclura pomifera*	Osa orange, Mock orange/ Yalancı portakal	Fruits	9-10	Against eye disease, arthritis, knee and joint pain.	C: 2, 4

5**Malus sylvestris, M. domestica*	Apple/ Elma, Alma	Fruits	9-10	It is a digestive enhancer, and its vinegar is a medicinal ingredient (fever reducer, stomach upset, etc.). It is also used against urinary tract infections and foot pain; it accelerates the elimination of toxic substances from the body.	D: 3-4
5**Malva* spp.	Mallow/ Ebegümeci	Leaves and flowers	5(-6)	Anti-inflammatory, for opening boils and for physical health; against psychiatric diseases.	A: 3-4
5**Matricaria chamomilla* etc.	Camomile/ Mayıs Papatyası	Flowers and above ground parts	5(-6)	Asthma, against poisoning; passing stones and strengthening the brain; for hair and skin health.	A: 3
1**Melissa officinalis*	Lemon Balm/ Melisa, Oğulotu	Leaves	5(-6)	Against nausea and rheumatism; analgesic, sedative.	A: 1-4
1**Mentha aquatica*	Watermint/ Su Nanesi	Above ground parts	5(-6)	Painkiller and sedative; against nausea and rheumatic diseases.	A: 1-4
1**Mentha piperita M. longifolia, M. spicata*	Mint/ Tüylü nane, Yarpuz, Filisgin	Above ground parts			A: 1-4
5**Mespilus germanica*	Medlar/ Beşbıyık, Muşmula, Döngel	Fruits	9-10	Diuretic; against urinary tract infections	D: 3
5**Memordica charantia*	Balsam apple Bitter Gourd / Kudret Narı, Balsam armudu	Fruits	-	It is rich in bioactive components such as antidiabetic, antioxidants, etc.	B: 1-3
5**Morus alba*	Mulberry/ Ak Dut	Leaves and fruits	5(-6)	Strengthening, strengthening the nervous system; against weakness.	D: 3-4
5**Morus nigra*	Mulberry/ Karadut	Leaves and fruits	5(-6)	It is a source of vitamin C. It is an antioxidant against anemia and infectious diseases.	D: 3-4
5**Morus rubra*	Mulberry/ Karadut, Kırmızı Dut	Leaves and fruits	5(-6)	Increases body resistance against	D: 3-4

				diabetes.	
1**Myrtus communis*	Myrtle/ Mersin, Murt	Leaves and fruits	9(-11)	Increases body resistance against diabetes.	A, D: 1-4
1**Nasturtium officinale*	Watercress/ Suteresi, Gerdeme	Aerial parts	5(-6)	Source of iodine; against goiter, tonsillitis, skin cracks; cancer prevention.	A: 3-4
5**Nelumbo nucifera*	Sacred Lotus/ Lotus çiçeği	Leaves and seed	5-7	Against insomnia and stress.	A: 4
1**Nepeta cataria*	Catnip, herb/ Hasnane, Kedi Nanesi, Nezleotu	Above ground parts	5-9	Against infectious diseases and nausea; pain reliever, relaxant, muscle relaxant, appetite stimulant.	A: 1-4
Nerium oleander	Oleander/ Zakkum, Zıkkım, Ağu	Above ground parts	5-9	Against cancer and in the production of healing honey.	A, D: 1-4
1**Nigella sativa*	Black cumin/ Çörekotu	Seed	5-7	It is known as a cure for all ills.	D: 3-4
1**Ocimum basilicum*	Basil/ Fesleğen, Festikan, Reyhan	Above ground parts	5-10	Against nausea; analgesic, sedative, muscle relaxant; in psychiatric diseases.	D: 1-4
5**Olea europea*	Olive/ Zeytin	Leaves and fruits	9-10	Against viral and infectious diseases; antidote and cell regenerator; in psychiatric diseases.	A, D: 1, 3, 4, 7
1**Origanum majorana*	Marjoram/ Mercanköşk	Above ground parts	6-9	Against infectious diseases, nausea and gas; pain reliever, relaxant, muscle relaxant, appetite stimulant.	A, D: 1-4
1**Origanum syriacum* subsp. *bevanii*	Oregano/ İncir kekiği				
1**Origanum minutiflorum*	Sütçüler Oregano/ Sütçüler kekiği				
1**Origanum onites*	Oregano/ İzmir Kekiği, Eşek kekiği, Bilyalı kekik				
1**Origanum vulgare*	Oregano/ İstanbul kekiği, Çanakkale kekiği				
5**Paliurus spina-christi*	Christ's thorn, Blackthorn/ Karaçalı, Çaltı	Fruits	6-9	Mineral source against evil eye.	A: 3-4
1**Panax ginseng*	Korean Ginseng, Red Ginseng / Kore	Roots	-	Anti-nausea, analgesic, sleep-	B: 3

	Ginsengi, Kırmızı Ginseng, Kırmızı Kore Ginsengi			inducing and muscle relaxant; in psychiatric diseases.	
2**Papaver somniferum*	Poppy/ Haşgeş, Afyon	Fruit, Seed, Seedling leaves	6-7	Pain reliever, sleep inducer, muscle relaxant, wound healing cough suppressant, chest softener, sedative, tranquilizer	D: 3-4
2**Papaver rhoeas*	Red Poppy/ Gelincik	Flowers	4-6(-7)		A: 3-4
2**Passiflora incarnata*	Passion/ Saat çiçeği, Çarkıfelek, Passiflora	Above ground parts	6-8	Pain reliever, sleep inducer, muscle relaxant, wound healing.	C: 3-4
1**Pastinaca sativa* subsp. *urens*	Parsnip/ Yabani havuç	Roots and above ground parts	6-8	The root is used in snakebite cases; a source of vitamins, antioxidants and potassium.	A: 5-6
5**Peganum harmala*	Peganum/ Üzerlik, Nazarlık	Seed	8-10	Against the evil eye; increases the power of the eyes.	A: 8-9
2**Pelargonium graveolens* vd.	Pelargonium, Geranium/ Itır	Above ground parts	6-9	Smelling it has a relaxing effect.	A, D: 1-4, 8
5**Persea gratissima*	Avocado/ Avokado	Fruits	10-11	Source of vitamin C, important for skin care.	C: 4
1**Petroselinum crispum*	Parsley/ Maydanoz	Above ground parts	1-12	Against kidney stones, appetite stimulant, flavoring food.	D: 1-4
2**Physalis alkekengi*	Bladder cherry Güveyfeneri	Fruit, Leaves and Stem	9-10	It is a diuretic, antiseptic, sedative, anti-inflammatory, antipyretic, cough suppressant, and expectorant. The ripe fruit is a diuretic and stone-reducing agent. The leaves and stems are antipyretic. The seeds cause premature labor.	A: 3-4
2**Physalis peruviana*	Cape gooseberry/ Altınçilek	Fruits	6-9	Sedative, diuretic, antipyretic.	C: 6-7
1**Pimpinella anisum*	Aniseed/ Anason	Fruit, Seed	6-7	Appetite stimulant, sleep-inducing, breast milk enhancer; against	D: 1-4

				gastric spasm complaints and intestinal gases; in the treatment of upper respiratory tract infections.	
1**Piper cubeba*	Cubeb/ Kebabiye, Kübabe	Fruits	-	For the treatment of pharyngitis, gonorrhea, respiratory tract infections, bronchitis, gastritis and ulcers.	C: 1-4
1**Piper longum*	Long pepper/ Darıfülfül	Fruits	-	Increasing the usefulness of nutrients; increasing digestive enzymes.	B: 3-4
1**Piper nigrum*	Pepper/ Karabiber	Fruits	-	Source of vitamins (especially vitamins A and C) and minerals (calcium and selenium); contains caffeine, helps keep the mind vigorous.	B:3-4
3**Pistacia lentiscus*	Mastix/ Mesteki Sakızı, Damla Sakızı, Sakız	Gum, Mastic	4-9	Against forgetfulness; stomach; for oral and dental health.	A, D: 4-5; 8-9
3**Pistacia terebinthus*	Terebinth Tree/ Çöğre, Menengiç, Çitlenbik	Fruits	9-10	Rich in oil and nutrients. Nourishing and strengthening.	A: 9-10
5**Pistacia vera*	Pistachio/Antep fıstığı	Fruits	8-9		D: 8-9
Platanus orientalis	Plane / Çınar, Kavak	Leaves and flowers	9-10	Against rheumatism and knee pain.	D: 1-4
2**Plantago lanceolata*	Plantain/ Sinirliot, Damarotu	Leaf, aboveground part	4-11	Wound healing, especially for internal organs.	A: 4-10
2**Plantago major, P. media, P. lanceolata*					
5**Polygonum aviculare*	Knotweed/ Madımak, Çoban değneği, Kuşekmeği	Above ground parts	4-10	Diuretic, against high blood sugar. Source of minerals.	A: 3-4
5**Portulaca oleracea*	Purslane / Semizotu, Tokmekan	Above ground parts	5-9	Against joint fluid loss, satiety and slimming.	A, D: 4-10
5**Potentilla reptans* vd.	Tormentil/ Beşparmakotu	Rhizomes	4-11	It is known as a medicinal plant.	A, B: 3-4, 8
5**Prunus*	Apricot/ Kayısı	Fruits	6-7	A fiber-rich food for intestinal health,	D: 3-4

armeniaca				against constipation.	
5**Prunus avium*	Cherry/ Kiraz	Fruit and Pedincules	5-6	Against urinary tract infections; diuretic; appetite stimulant, antidote, cleansing toxins from the body; lowering blood density.	D: 3
5**Prunus cerasus*	Morello Cherry/ Vişne	Fruit and Pedincules	8-9	It helps to lose weight by burning fat in the body.	D: 3
5**Prunus elaegnifoli, P. divaricata* etc.	Plum / Çakal eriği, Yabani erik	Fruits	7-9	Source of vitamins and minerals. Important for intestinal health.	A, D: 3
5**Prunus domestica*	Plum/ Erik	Fruits	7-9		D: 3
5**Prunus mahaleb*	Mahaleb cherry / Mahlep, İdris	Fruits	7-8	It is used to relieve kidney and gas pains; against liver diseases and as an antidiabetic.	D: 1-4
5**Prunus spinosa*	Sloe/ Çakal Eriği, Karadiken	Fruits	6-8	Against diarrhea and stomatitis; vasoconstrictor, laxative, antioxidant, digestive; diuretic and sweating; antipyretic.	A, D: 3-4
5**Punica granatum*	Pomegranate peel / İnar, Nar	Fruit, Fruit Peel, Seed	9-10	Against cardiovascular diseases, gum diseases, diabetes, hypertension, Alzheimer's disease and obesity; constipating, vasoconstrictive, hemostatic. Rich in minerals.	D: 3-4
2**Pyracantha coccinea*	Scarlet Firethorn/ Ateş dikeni	Fruits	8-10	Against high blood sugar, circulatory system disorders, high blood pressure, digestive system problems, respiratory infections.	D: 1-4
2**Quercus ithaburensis* etc.	Oak, Mount Tabor oak/ Palamut meşesi	Seeds and Flowers	9-10	Hemostatic, vasoconstrictive.	A: 3-4

2* *Ceratocephalus* and *Ranunculus* spp.	Buttercup, Spearwort/ Düğün Çiçeği	Above ground parts	4-7	Anti-constipation, wound healing and anti-rheumatic.	A: 3-4
1**Raphanus raphanistum*	Wild Radish / Yabani Turp	Above ground parts and roots	4-6	For liver, lung and kidney health; stomach.	A: 3-4
1**Raphanussativus*	Radish/ Turp	Root, Seed	4-6		D: 3-4
Rhus coriaria	Sumach/ Sumak, Mavru	Body shells	8-10	Against skin wounds.	A: 1-4
5**Ribes nigrum*	Black currant /Frenk Üzümü	Flowers and seed	5-6	Vitamin and mineral source, antioxidant, anti-inflammatory, antiviral, antidiabetic, anticancer and antitumor.	D: 3-4
5**Ribes rubrum*	Red currant/ Frenk Üzümü	Fruits and leaves			A: 3-4
2**Robinia pseudoacacia*	Locust tree/ Akasya	Flowers	4-6	Sedative, antipyretic laxative and emetic	C: 1-4
5**Rosa canina, R. dumalis, R. heckeliana, R. gallica* etc.	Rose Hip, Dog rose/ Kuşburnu, İtburnu	Flowers and seeds	8-10	Against sugar, cance and constipation; rich in bioactive substances; strengthening, source of vitamin C etc.	A: 1-4
5**Rosa damascena, R. stipulata, R. alba, R. moschata, R. odorata, R. comantema*	Rose/ Gül	Flowers	4-7	Calming, relaxing, antiseptic, skin cleanser, against rosacea and cancer, etc.	D: 1-4
1**Rosmarinus officinalis*	Rosemary/ Biberiye, Kuşdili	Leaves	4-7	Against high blood sugar; in the treatment of muscle pain and rheumatism.	A, D: 1-4
5**Rubus deliciosus*	Blackberry/ Böğürtlen	Fruits	7-9	Against tonsillitis and high blood sugar; diuretic, source of vitamin C	A: 1-4
5**Rubus fruticosus*		Flowers and Leaves	7-9		
5**Rubus idaeus*	Raspberry/ Ahududu, Frambuaz	Flowers and Leaves	5-6	Against cancer, high blood sugar, eye failure; for intestinal health; blood purifier; appetite stimulant, source of Vitamin C.	D: 1-4
5**Rumex acetosa, R. crispus* etc.	Sorrel/ Kuzukulağı	Whole plant	4-6	Against constipation; blood purifier, digestion accelerator, stomachic; for oral and dental health.	A, D: 1-4

5**Ruscus aculeatus*	Butcher's Broom/ Tavşan memesi, Herdem taze	Flowers and roots	7-9	Against skin diseases.	A: 7, 9
3**Salix* spp.	Willow bark/ Söğüt	Body shell	4-7	Antipyretic, analgesic, sedative, antirheumatic, blood thinner.	A: 3-4
1**Salvadora persica*	Tooth brush three, Mustard three/ Misvak	Extract	-	For oral and dental health, as a stomach protector.	B: 3-4
5**Salicornia europaea*	Sea beans/ Deniz börülcesi	Above ground parts	6-10	Against bronchitis, hepatitis and intestinal problems; source of vitamins and minerals, immune system booster.	A, D: 6-10
1**Salvia hispanica*	Chia / Kiya	Seed	6-8	Against stomach disorders, constipation, colds, flu, etc. infections; also as a sedative in reducing sweating; antiseptic.	C: 1-4
1**Salvia officinalis*	Sage/ Adaçayı	Leaves			D: 1-4
1**Salvia sclarea*	Clary Sage/ Misk Adaçayı	Flowers, Leaves			A: 1-4
1**Salvia fruticosa, S. grandiflora*	Trilobed Sage/ Adaçayı	Leaves			A: 1-4
1**Salvia tomentosa*	Boz şalba	Above ground parts			A: 3-4
2**Sambucus ebulus*	Elderwort/ Cüce Mürver	Flowers	6-8	Wound healing, diuretic; against rheumatism and infectious diseases.	A: 3-4
1**Sambucus nigra*	Elder/ Mürver, Kara Mürver	Flowers	8-10	Laxative, diuretic and diaphoretic. Against influenza and lung diseases.	D: 1-4
2**Saponaria officinalis*	Soapwort/ Sabun otu	Rhizomes and above ground parts	4-9, 11	Diaphoretic, bile and diuretic.	D: 1-4
1**Satureja cuneifolia*	Savory/ Dağ kekiği, Taş kekiği	Above ground parts	7-9	Cough, sore throat; heartburn, cold, pain reliever, against intestinal diseases.	A: 1-4
1**Satureja hortensis*	Summer Savory/ Zahter, Kekik		5-8		D: 1-4
1**Satureja montana*	Winter Savory/ Geyikotu, Dağ kekiği		7-9		A: 1-4
1**Sesamum indicum*	Sesame/ Susam	Seed	8-9	Against gynecological diseases; antioxidant; source of protein and minerals.	D: 3-4
				Diuretic, appetite	

1**Sideritis* spp.	Siteritis/ Dağ Çayı / Yayla Çayı, Tokalı çay, Sivri çay, Dallı	Inflorescenscence	5-7	stimulant, vasodilator, sexual power suppressant, tranquilizer.	A: 1-4
5**Silybum marianum*	Milk Thistle/ Devedikeni Meryemana Dikeni	Above ground parts	7-8	Diuretic, appetite stimulant, rheumatism and fever reducer.	A: 3-4
Sisymbrium officinale	Hedge mustard/ Bülbül otu, Süpürgeotu	Above ground parts	6-8	Diuretic.	A: 1-3
Solanum nigrum	İt üzümü	Fruits	8-10	In psychiatric diseases.	A: 1-3
2**Solanum tuberosum*	Potato/ Patates, Kumpir	Tubers	6-8	It has effects such as binding iron ions in the body, reducing unstable compounds, and clearing superoxide It balances blood pressure and strengthens the immune system. It is beneficial for the digestive system and brain health. It is a source of minerals. It is used against headaches, burns from metal welding, and bloodshot eyes, as well as against diarrhea.	D: 3-4
5**Sonchus oleraceus*	Sow thistle/ Eşek gevreği, Eşek marulu, Sütotu	Leaves and stems	4-8	Regulating blood pressure and digestion; against constipation and inflammation.	A: 3-4
3**Sorbus domestica, S. aucuparia* etc.	Sorb Apple / Üvez	Leaves, Flowers	9-10	For cardiovascular health; sedative, antioxidant, immunotropic, anti-inflammatory.	D: 3-4
2**Tagetes erecta*	Marigold / Kadife çiçeği	Flowers	2-10	Antimicrobial and antioxidant, anti-depressive, anti-inflammatory, antimycotic; pain reliever, burn treatment and blood	D: 3

				pressure balancing.	
3**Tamarindus indica*	Tamarind/ Demirhindi	Fruits	-	To balance bile disorders, ulcers and stomach acidity.	B: 3-4
5**Tanacetum* spp.	Feverfew/ Pireotu, Gümüşdüğme	Above ground parts	5-8	Strengthening, menstrual inducing, stimulant, antipyretic.	A: 3-4
2**Taraxacum* spp.	Dandelion/ Karahindiba	Above ground parts	4-7	For liver health; source of minerals and vitamins.	A: 3-4, 8
2**Terminalia* spp.	Myrobalani, Almendro/ Halile	Fruits	-	Rich in bioactive components; antioxidant, antibacterial.	B: 1-3
2**Teucrium chamaedrys*	Wall germander/ Kısamahmut	Above ground parts	5-8	Against intestinal gases and nausea; antimicrobial.	A: 1-4
2**Teucrium polium*	Poley/ Oğlanotu, Karaderme, Yer meşesi, Peryavşan				
Teucrium scordium	Water germander, Wood sage/ Kurtluca	Above ground parts	5-9	The plant is a strong emetic with an unpleasant, heavy odor.	A: 4
5**Thea sinensis*	Tea/ Çay	Leaves	5-6	Against diseases such as obesity, diabetes, cardiovascular diseases and cancer; attention-grabbing, stimulating, against eye redness.	C: 3-4
1**Thymbra spicata*	Za'aatar/ Zahter, Sater, Karabaş, Kekik	Above ground parts	4-6	Against infectious diseases and nausea; pain reliever, relaxant, muscle relaxant, appetite stimulant.	A: 1-4
1**Thymus* spp.	Thyme/Kekik				
1**Tilia* spp.	Lime/ Ihlamur	Flowers and Leaves	5-6	Diuretic, sudorific, breast softener; psychiatric diseases.	A, D: 1-4
5**Tribulus terrestris*	Bullhead, automobile weed/ Deveçökerten, Demir dikeni	Flowers and Flowers	5-8	Against diabetes.	A: 3-4
2**Trifolium pratense*	Red Clover / Çayır üçgülü	Inflorescensce	4-7	Against gynecological	A: 3-4
2**Trigonella coarulea*	Sweet Trefoil, Blue Fnugreak/ Çemen	Above ground parts			

2**Trigonella foenum-graceum*	Fenugreek Çemen/ Boyotu	Seed		diseases	
5**Urtica* spp.	Nettle/ Isırgan, Dalağan	Above ground parts	4-7	Blood purifier, diuretic, appetite stimulant; anti-rheumatism.	A: 3-4
5**Vaccinium myrtillus*	Bilberry / Yaban Mersini, Çoban Üzümü, Yer liforu, Likapa	Flowers and Leaves	6-7	Against cancer, flu, heart diseases; eye health, lowering cholesterol.	D: 3-4
5**Valeriana officinalis* etc.	Valerian/ Kediotu	Roots and above ground parts	5-6	Sedative, fertility enhancer, against eye diseases; psychiatric diseases.	A, D: 3-4
2**Verbascum* spp.	Mullein/ Sığırkuyruğu	Flowers and above ground parts	4-7	Against constipation and gynecological diseases; breast softener	A: 3-4, 7
2**Verbena officinalis*	Verbana/ Mine Çiçeği, Güvercin otu	Above ground parts	5-6	Antipyretic, anti-constipation.	A: 3-4
5**Viburnum opulus*	Water Elder/ Gilaburu	Fruits	8-9	Against diseases such as kidney stones etc.	A, D: 3-4
2**Viburnum prunifolium*	Black-Haw, Cramp Bark, Viburnum	Bark and Root			
2**Vicia ervillia*	Ervil/ Burçak	Seed	6-7	In the treatment of rheumatism.	D: 3-4
2**Viola odorata*	Sweet Violet/ Kokulu Menekşe	Flowers	5-7	Rich in vitamins; oil for massage.	A, D: 3-4
2**Viola tricolor*	Wild pansy/ Hercai menekşe				
2**Viscum album*	Mistletoe/ Gövelek, Ökse otu, Çekem, Burç, Gökçe	Leaf, Fruit, Seed and stems	7-10	Against constipation, cancer; in the treatment of cardiovascular diseases.	A: 3-4
2**Vitex agnus-castus*	Chaste tree/ Hayıt	Fruit, Seed		To increase breast milk.	A: 3
5**Vitis vinifera*	Grape/ Üzüm, Asma, Tevek	Leaf, Fruit, Seed	8-9(-10)	Against anemia, eye pain, gynecological diseases.	A, D: 3-4
1**Ziziphora clinopodioides* etc.	High Mountain Mint/ Morkız çayı, Dağ reyhanı, Mor reyhan, Nane ruhu, Kekik, Zahter	Above ground parts	5-7	Against infectious diseases and nausea; pain reliever, relaxant, muscle relaxant, appetite stimulant.	A: 1-4
5**Zizyphus jujuba*	Jujube/ Hünnap	Fruits	7-9	Antioxidant, soothing, moisturizing, anti-aging, anti-radiatio.	D: 3-4

RESULTS AND DISCUSSION

The primary objective of this study is to identify the medicinal plant potential of the Lakes Region, their intended uses, and methods of application. For this purpose, a comprehensive inventory of the region's plant species and their uses has been compiled (Table 1). Accordingly, approximately 230 taxa have been recorded in the region, including 15 Gymnosperms, 165 Angiosperms, 10 ferns, and 8 fungi (Table 2). Among these taxa, 65 are aromatic, 59 are poisonous or narcotic, 24 are dye-bearing, and about 10 are forest tree species (Table 3).

The distribution of medicinal plants used in the region by major families is as follows: Pinaceae (8), Cupressaceae (4), Liliaceae (7), Orchidaceae (10), Poaceae (6), Rosaceae (35), Lamiaceae (25), Asteraceae (16), Apiaceae (13), Fabaceae (13), and Solanaceae (7) (Table 4). The majority of the plants used belong to the Dicotyledonous class, and almost all of these are herbaceous species. The most commonly used plant parts, in order of frequency, are flowers, fruits, seeds, leaves, and rhizomes (Table 4). The most common methods of use include applying plant oils to the skin and ingesting preparations as food. For internal organ disorders, medicinal plants are commonly used in the form of foods, incense, or chewing gums, whereas for skin diseases, they are applied as wraps, poultices, kohl, or soap.

There are three natural factors that contribute to the occurrence and spread of diseases: air, water, and soil pollution. Low-quality food often results from the contamination of these elements. Product spoilage refers to unacceptable alterations in characteristics such as appearance, consistency, colour, odour, and taste, rendering both foods and medical products unusable. In folk medicine, however, remedies are prepared freshly for the individual and consumed within a short period (Özçelik, 2022). Today, studies on medicinal and aromatic plants are steadily increasing. As the findings of such research are regarded as meaningful and beneficial, this trend is expected to continue in the future.

According to data from the World Health Organization, approximately 70–80% of individuals rely on medicinal plants as part of their primary healthcare practices. In recent years, the incidence of psychiatric disorders (such as sleep and behavioural disorders) has been rising rapidly, and many people have turned to herbal remedies for these conditions, as they do for other illnesses (Kleiner, 1995; Newman and Cragg, 2020).

It is important to recognize that each plant may have multiple uses, with dosages and treatment durations varying according to the intended purpose. A medicinal preparation can be ineffective in small amounts yet harmful in excessive doses. Although most aromatic herbs are commonly used as spices, when applied in larger quantities and higher concentrations, they may also exhibit significant medicinal properties. The labels 'natural', 'organic', 'ecological' or 'medicinal' do not necessarily imply that a product is harmless to living beings. Factors such as dosage, duration of use, variety, species, and the plant's growing environment can all influence its effects.

Information on collection, flowering, and harvesting periods cannot be provided for imported herbal products; such details are relevant only for plants cultivated or native to Türkiye. For imported products, only the parts used and methods of application are discussed. Plants commonly consumed internally, such as salep and tea, are considered non-toxic and are therefore regarded as safe and easy to use. Greater caution is required, however, with poisonous species. According to traditional folk medicine, poisonous and narcotic plants are generally avoided in treatments (Özçelik, 2022). Consequently, highly toxic species such as *Cionura erecta*, *Cynanchum acutum*, *Vincetoxicum* spp., *Conium maculatum*, *Datura*, and *Solanum* spp. were excluded from the list (Seçmen and Leblebici, 1987).

Plants play an important role in treatment due to their antioxidant properties. For centuries fruits, vegetables, and wild herbs with medicinal value have been used worldwide in the treatment of diseases. Wild plants generally exhibit higher antioxidant activity than cultivated species; for instance, the essential oil of mountain-grown thyme is considered superior in quality to that of field-grown varieties. Similarly, wild fruits tend to possess greater nutritional and medicinal qualities than their cultivated counterparts. Vegetables, fruits, and spice plants represent major dietary sources of phenolic compounds and contribute antimicrobial, antioxidant, anti-allergenic, anti-atherogenic, anti-inflammatory, antithrombotic, cardioprotective, and vasodilatory effects. Food plants, especially fruits rich in vitamins and minerals, often enhance the immune system and reduce the risk of disease, forming the basis of what is termed "immunotherapy" or preventive medicine. In addition to these plant-derived benefits, fats and fatty acids also play a crucial role. According to Lauritzen et al. (2000), they are essential for maintaining physiological parameters such as blood cholesterol and arterial blood pressure at appropriate levels, as well as for supporting muscle and connective tissue strength and ensuring skin and mucosal health (Yaşa et al., 2023; Lauritzen et al., 2000).

The descriptions of the uses of the plants listed in Table 1 may appear incomplete, as many of these species have additional medicinal properties. However, the primary aim of this article is to present an inventory of the region's potential medicinal plants and their methods of use. A significant portion of medicinal plants is obtained or produced from the region's natural flora. A total of 230 taxa have been identified, including 35 Gymnospermae, 165 Angiospermae, 10 Pteridophyta, and 8 Fungi. Of these taxa, 65 are aromatics, 60 are poisonous/narcotics, 25 are dye carriers, and about 10 are forest trees. The distribution of medicinal plants used in the region by family is as follows: Pinaceae 8, Cupressaceae 4; Liliaceae 7, Orchidaceae 10, Poaceae 6; Rosaceae 35, Lamiaceae 25, Asteraceae 16, Apiaceae and Fabaceae 13, and Solanaceae 7. The most commonly used plants belong to the Dicotyledonous (Magnoliopsida) class.

Table 2. Distribution of plants used for medicinal purposes in the Lakes Region into major plant groups and their used organs.

Plant groups	Total taxa for medical purposes	Under ground organs	Stems	Leaves	Flowers	Cone/ fruit/ fructification	Seeds	Plant sap/ and resins	Above ground parts
Gymnospermae	15	-	6	-	-	7	1	8	-
Liliopsida	35	13	7	5	2	6	5	-	-
Magnoliopsida	165	13	50	23	13	63	24	7	50
Pteridophyta	10	-	7	-	-	-	-	-	7
Fungi	8	-	-	-	-	-	-	-	8
Other plants(5*)	1	5	45	2	-	-	-	-	-

Table 3: Usage characteristics of plants used for medicinal purposes in the Lakes Region

Characteristics of the plants	Gymnospermae	Liliopsida	Magnoliopsida	Pteridophyta	Fungi
Aromatiscs (*1)	3	11	51	-	1
Poisonous/narcotics (*2)	1	5	46	7	-
Forest trees (3*)	7	-	5	-	-
Dye plants (4*)	-	6	18	-	-

Table 4: Therapeutic purposes and comments on plants used for medicinal purposes in the Lakes Region

Familias (In Latin and Turkish)	**No. of taxa**	**Ratio to Total taxa (%)**	**Used parts**	**Diseases used and comments**
Conifers (Gymnospermae)				
Pinaceae (Çamgiller)	8	3,43	Fresh Cones and Shoots, Resin	It is used against infectious diseases and to promote hair growth. It's also employed in the treatment of respiratory system disorders and insect repellent. Its active ingredients are resin and pinene. Its molasses, hydrosol, tar, and volatile oil are used.
Cupressaceae (Servigiller)	4	1,72		
Monocots (Liliopsida)				
Liliaceae (Zambakgiller)	7	3,00	Bulbs, Leaves	It strengthens the body against infectious diseases and poisoning; lowers blood density, opens the breath, and relieves earaches in babies. It soothes the digestive system and stimulates the appetite.
Orchidaceae (Salepgiller)	10	4,29	Bulbs	It makes you feel full and prevents gynaecological diseases. It aids digestion and stimulates the appetite.
Poaceae (Buğdaygiller)	6	2,57	Seed, Fruit, Rhizome, Inflorescence	The inflorescence tassel of *Zea mays* is effective Against urinary tract disorders; its fruits are digestive and appetite-stimulating. It is rich in carbohydrates and is very important for food and feed purposes. There are many poisonous species.
Dicots (Magnoliopsida)				
Rosaceae (Gülgiller)	35	15,02	Fruit, Seed, Flower	Against tonsillitis, hypertension, and diabetes; a source of vitamins A and C; a carminative and digestive enhancer; and its vinegars are very important medicinal materials (fever reducer, stomach upset, diuretic, and perspiratory, etc.). It helps with weight loss by burning body fat. It is calming, relaxing, antiseptic, etc., a vasoconstrictor, antioxidant, antipyretic, against liver diseases, etc.
Lamiaceae (Ballıbabagiller)	25	10,72	Flower, Leaf, and Stem	It is used as a pain reliever, a fragrant antiulcer, antispasmodic, and sedative, against throat inflammations, as a carminative, stimulant, and for stomach ailments; and in the treatment of coughs, lung, digestive, and chest ailments, intestinal diseases, etc. It is a sleep-inducing agent; against nausea and rheumatic diseases. Against infectious diseases and nausea, and as an appetite stimulant. It relieves constipation and reduces sweating; against infections such as colds and flu, and is an antiseptic. It increases

				urine output, stimulates appetite, is a vasodilator, and reduces sexual potency.
Asteraceae (Yıldızçiçeği-giller)	16	6,86	Flower, Leaf, and Stem	It is used against nausea and stomach cramps; against colds, feverish infectious diseases, haemorrhoids, and headaches; as a pain reliever and diarrhoea reliever; as an immune system booster; as a haemorrhoid stopper; as a diuretic, appetite stimulant, gas reliever, and diuretic; as a wound healer; against hair and skin diseases and rheumatism; in the treatment of colds, flu, and jaundice; as a sedative; as a liver cleanser, menstrual stimulant, diaphoretic, anti-parasitic, antioxidant, antibacterial, anti-depressant, anti-inflammatory, and antimycotic; in the treatment of burns and in balancing blood pressure.
Apiaceae (Turpgiller)	13	5,57	Flower, Leaf, and Stem	It is an antispasmodic, carminative, diaphoretic, diuretic, expectorant, appetite stimulant, and is used against the liver diseases, urinary tract infections, bad breath, infectious diseases, and diabetes; against menstrual disorders; increases cell membrane permeability; and is important in snakebite cases. It adds flavour to foods and is rich in vitamins, antioxidants, and potassium.
Fabaceae (Baklagiller	13	5,57	Fruit, Seed, Flower, Leaf, and Stem	It is used against gynaecological diseases and minerals deficiencies; it is crucial in animal nutrition and health; it is valuable in the production of gum tragacanth and Astragalus honey; and is very rich in protein. It is one of the primary sources of food.
Solanaceae (Patlıcangiller)	07	3,00	Fruit, Seed, Flower, Leaf, and Stem	Used for burns in metal welding workers, headaches, and diarrhoea; sedative, diuretic, and antipyretic.
Brassicaceae (Hardalgiller)	05	2,14	Flower, Leaf, and Stem	Aromatic plants. Generally slimming and nutritious. Watercress (*Nasturtium officinale*): Against goitre, tonsillitis, cracked skin on the feet, and cancer prevention; source of iodine.

Table 5: Numerical results for the therapeutic use of plants in the Lakes Region

Plant groups	Immune system booster	Skin and hair diseases	Internal organ diseases	Infectious diseases	Systemic diseases	Mental and nervous diseases	Mineral and vitamin source	Chronic diseases
Gymnospermae	3	5	3	5	4	-	1	4
Liliopsida	11	3	7	4	9	-	3	6
Magnoliopsida	4	5	45	22	40	8	20	28
Pteridophyta	1	1	5	1	-	-	-	2
Fungi	8	-	-	-	-	-	8	-

The most commonly used parts of the region's medicinal plants, in order of importance, are flowers, fruits, seeds, leaves, and rhizomes. The most frequent methods of application include the topical use of plant oils and oral intake. These practices are also prevalent in Uyghur medicine, as well as in Uzbek and Azerbaijani cultures. The least common uses are in the form of gum, poultices, incense, and soap. For internal organ health, the dominant method is consumption as food, whereas for skin diseases, wrapping, poultices, and topical applications are preferred. Aromatic and functional food plants constitute the predominant forms of use. Some plants possess underground stems such as rhizomes, tubers, corms (hard bulbs), and bulbs. Since they grow underground, certain publications classify these stems as roots.

Türkiye is rich in medicinal and aromatic plants, and its ecological conditions are particularly suitable for the cultivation of many species. In the Lakes Region, several industrial oilseed crops are cultivated, including *Rosa damascena* (Gül), *Cuminum cyminum* (Kimyon), *Foeniculum vulgare* (Rezene), *Nigella sativa* (Çörekotu), *Thymus, Origanum, Satureja* spp., *Thymbra spicata* (Kekik), *Carthamus tinctorius* (Aspir), *Helianthus annuus* (Ayçiçeği), *Papaver somniferum* (Haşhaş), and *Cannabis sativa* (Kenevir/Kendirotu). In recent years, other plants have also been produced commercially, or their production levels have been steadily increasing in the region. These include *Asparagus officinalis, A. acutifolius* (Kuşkonmaz), *Salicornia europaea* (Denizbörülcesi), *Crocus sativus* (Safran), *Gypsophila arrostii* var. *nebulosa* (Çöven), *Iris germanica* (Zambak/Süsen), *Aronia melanocarpa* (Aronya), *Rumex acetosella* (Kuzukulağı), *Nasturtium officinale* (Suteresi/Gerdeme), *Origanum minutiflorum* (Sütçüler kekiği), *Origanum majorana* (Mercanköşk), *Hippophae rhamnoides* (Yalancıığde), *Pleurotus ostreatus* (İstiridye mantarı), and *Agaricus bisporus* (Kültür mantarı).

Some of these plants are produced primarily for domestic needs, while others are cultivated for commercial purposes. Production trials are also underway for *Zingiber officinale* (Zencefil), and *Crocus sativus* (Safran) cultivation has recently begun in the mountain villages of Eğirdir. Furthermore, several commercial varieties of *Helichrysum* (Altınotu/Herdemtaze) and *Achillea* (Ayvadana/Civanperçemi) are grown in Isparta, and promising results have been reported for *Zingiber officinale* (Zencefil) cultivated in greenhouses. The essential oil of *Iris germanica* is extracted and sold in Europe, although its extraction is technically difficult. *Matricaria chamomilla* (Alman papatyası) can also be produced in greenhouses and may eventually be adapted to open-field cultivation.

Previous studies conducted in the Lakes Region have documented the production of functional foods for therapeutic purposes, as well as the traditional uses of plants in their preparation (Karadoğan et al., 2000–2003; Özçelik, 1987; Özçelik 2023a; Özçelik 2023b; Özçelik 2025). These findings provide important background for understanding the ethnobotanical practices identified in the present study.

Panicum miliaceum (Akdarı) is one of the region's important food, birdseed, and medicinal grain crops; however, its production has declined in recent years, and its seeds are now on the verge of extinction. Türkiye has a rich flora in terms of essential oil plants. Essential oils are obtained from some species collected from the natural flora, while others are exported abroad (Ceylan, 1997).

'Bucak Salebi' is a well-known traditional food in Türkiye and is widely consumed in the Lakes Region. Both the plant material and the preparation technique are considered equally important. *Orchis anatolica* (Taurus Salep), which is endemic to the region, serves as the primary raw material for Bucak Salebi; however, its tubers are subject to over-harvesting. In contrast, inexpensive salep imported from the Netherlands, commonly found in supermarkets, is regarded as being of poor quality, as it is produced using tissue culture techniques. In addition, a raw material locally known as 'Zereşk' is imported from Iran and processed in Isparta, where it enjoys strong commercial demand. After extensive research, we identified this plant as the ripe, dried fruit of the *Berberis* species, also known in Turkish as 'Kadın tuzluğu'

or 'Karamuk.' Its natural distribution is widespread throughout the region. Another species, *Lycopodium clavatum*, is not native to the Lakes Region but occurs naturally in the Black Sea Region. While some medicinal plants are imported and purchased from herbalists, the majority of those used in the Lakes Region are obtained directly from the natural flora (Seçmen and Leblebici, 1987).

One of the most essential inputs in pharmaceutical production is raw pharmaceutical materials, which can be of either natural or synthetic origin. Naturally derived raw materials are obtained primarily from plants, animals, and minerals. Spices, in particular, have long been used in medicine for a wide range of purposes. They are known for their blood-cleansing, sedative, digestive, diaphoretic, diuretic, appetite-stimulating, blood-thinning, carminative, expectorant, antipyretic, antiparasitic, respiratory-stimulating, and antimicrobial properties, as well as for their use in the treatment of ailments such as paralysis, rheumatism, epilepsy, malaria, asthma, dysentery, diabetes, and various skin diseases (İlisulu, 1992).

The discovery of many active pharmaceutical ingredients used today for therapeutic purposes, such as ephedrine, escin, digitoxin, quinine, cocaine, reserpine, salicin, and senna anthraquinones, has been made possible through ethnobotanical research conducted across different societies. Ethnobotanical studies play a crucial role in documenting and preserving the relationship between Turkish people and plants, ensuring the transmission of traditional knowledge to future generations and facilitating the discovery of new drugs grounded in scientific research (Kendir and Güvenç, 2010).

The use of plants for therapeutic purposes dates back to ancient times. In this context, women's healing practices are as old as human history itself and have persisted to the present day (Gün and Şahinoğlu, 2013). Throughout history, women have played a vital role in the preparation of herbal medicines and in maintaining health through their compassionate caregiving practices. They have been an integral part of healing traditions and in combating disease. However, these significant contributions have often remained invisible in historical records due to gender-based social structures (Achterberg, 2009; Gün and Şahinoğlu, 2013).

In Western countries, the exclusion of women healers from academic institutions during the Middle Ages is considered a major factor that limited their scientific contributions to the field of medicine. During this period, women primarily served as herbalists, midwives, surgeons, barber-surgeons, nurses, and empirical practitioners. It has been reported that, lacking formal education, these women practised healing through various empirical methods, including the use of herbal and home remedies, cleansing, and bloodletting (Minkowski, 1992).

The era of the witch hunts, which also targeted women skilled in herbal medicine, represents one of the most brutal examples of violence against women in history (Aksan, 2013). This period, lasting approximately 350 years in Western Europe (1430-1780), resulted in the deaths of thousands of people, the majority of whom were women (Akın, 2005). According to Genç (2011), the English word "witch" (Turkish: *cadı*) originally meant 'wise' or 'intelligent woman'. These so-called witches were in fact among the first folk healers in Western Europe to practice herbal medicine (Genç, 2011). It is also noted that witches and wise women differed in how they used their knowledge: while both possessed esoteric wisdom, witches were believed to cause harm to humans and other living beings, whereas wise women used their knowledge to help others and cure illnesses (Akın, 2001).

In villages where there were no physicians, healers who treated illnesses with herbs and assisted women during childbirth eventually became victims of the witch hunts. Midwives, in particular, were frequently targeted because they possessed the placenta, which was believed to be used in magical rituals or spells. Several of the mysterious plants used by these healers were identified as *Mandragora autumnalis* (Adamotu), *Aconitum* spp. (Kaplanboğan), *Ruta graveolens* (Sedefotu), *Humulus lupulus* (Şerbetçiotu), and *Atropa belladonna* (Güzelavratotu) (Aksan, 2013).

Examination of these plants reveals that the root of *Mandragora autumnalis*, due to its human-like shape, was used in rituals with the belief that it possessed magical powers; *Aconitum* spp. is highly toxic and can cause death; *Ruta graveolens* and *Humulus lupulus* have sedative properties and were used in the treatment of ailments such as insomnia, loss of appetite, dizziness, shortness of breath, stomach pain, rheumatism, and gout. The toxic effects of *Atropa belladonna* were also used in certain rituals, and the plant is known to cause hallucinations, dry mouth, and heart palpitations (Aksan, 2013).

While women healers in Western Europe faced persecution, in Anatolia, traditional healing practices, often led by women, continued to evolve within local communities. It is well documented that in Western countries, thousands of people accused of witchcraft by the Inquisition Courts during the Middle Ages were tortured and executed on charges of being 'witches'. In contrast, no official records of witchcraft trials have been found in the Ottoman Empire, which represented the Eastern world during this period (Doğan, 2013). Historical documents suggest that, although some individuals were involved in practices resembling witchcraft, these cases did not conform to the Western definition of witchcraft, and such individuals were more often exiled rather than subjected to severe punishment (Doğan, 2013). This difference shows how cultural beliefs shaped women's roles in healing.

CONCLUSION AND RECOMMENDATIONS

The Lakes Region was selected as the study area for this ethnobotanical research. This region, formerly known as the Teke Region, is primarily located within the provinces of Isparta and Burdur, and partially encompasses the provinces of Antalya, Afyonkarahisar, and Konya, while also bordering Denizli and Muğla (Fig. 1). The regional boundaries are not as sharply defined as provincial or district borders. However, the cultural practices related to plant use among the local population are largely similar, as the natural landscape forms a shared ecological and cultural boundary that shapes people's livelihoods and lifestyles. Although these provinces share similar ecological and cultural characteristics, their main sources of livelihood differ. The inhabitants of Burdur are predominantly engaged in animal husbandry, whereas those of Isparta primarily rely on agriculture (Özçelik and Balabanlı, 2005).

There is little variation in the flora, traditions, and daily life of the inhabitants across the region. Therefore, in ethnobotanical studies, regional boundaries are more meaningful than political divisions such as provinces or districts. To date, no ethnobotanical study of this detail has been carried out in the Lakes Region or elsewhere in Türkiye. The area is notably rich in medicinal and aromatic plants and has a climate well-suited for their cultivation.

Many plant species that have been used in folk medicine since ancient times continue to shed light on modern scientific research. One of the most significant figures to document this knowledge was the military physician Pedanius Dioscorides, the author of the monumental work *Materia Medica*. Born in the Cilicia region of Türkiye (near Adana), Dioscorides made major contributions to the development of medical and botanical sciences in both the Eastern and Western worlds (Yıldırım, 2022). In the *Materia Medica*, he described approximately 600 plant, animal, and mineral-based drugs and proposed a simplified classification system for plant descriptions (Demirci Kayıran, 2019). Many of the medicinal plants mentioned by Dioscorides are still used today for the same therapeutic purposes, with little variation over time (Demirci Kayıran, 2019). According to his records, the cardiotonic glycosides found in *Urginea maritima* (Adasoğanı) have heart-strengthening properties, while the leaves and branches of *Viscum album* (Ökseotu) possess sedative, diuretic, vasodilatory, hypotensive, anti-inflammatory, hypoglycemic, and cardiac depressant effects. The plant has also been used in tumour treatments.

Our field observations in the Lakes Region revealed that *Viscum album* growing on forest trees is traditionally used for lung and liver cancer, whereas those growing on fruit trees are used for stomach cancer. Similarly, *Allium sativum* (Sarımsak) is used in the treatment of hair loss and skin disorders. These traditional uses

closely parallel the applications of the same plants in modern phytotherapy.

In conclusion, a critical evaluation of the historical development of medicine is essential, as it can shed light on contemporary medical practice. In this context, the contributions of healers who, despite lacking formal medical education, devoted their knowledge to the service of humanity; women physicians such as Agnodice, who were forced to conceal their gender in order to practice medicine; and women who were marginalized or overlooked for their healing roles during the Middle Ages should not be forgotten. Increasing research in this field is essential to highlight women's experiential knowledge in herbal healing practices.

Medical knowledge and healing traditions transmitted from past to present are vital not only for understanding the evolution of medicine but also for preserving the cultural heritage of societies. It should also be remembered that the experiential wisdom accumulated by rural communities, particularly women healers, can make valuable contributions to modern medicine.

The study's recommendations are listed below:

- The use of plants for medicinal purposes is gradually diminishing. Further studies are needed to identify and sustain ethnobotanical values, as migration from rural areas to urban areas and the availability of modern facilities are rapidly increasing.
- Essential oils and oily waters are the most commonly used medicinal materials in folk medicine. Due to their dense structure and potent composition, essential oils require utmost care, attention, and knowledge in their application. Not every essential oil can be applied directly to the skin or ingested, and it is not advisable to use all essential oils at the same dose and frequency (Özçelik, 2025).
- Poisonous plants, particularly ferns and mushrooms, should not be used by individuals with high blood pressure or heart disease, pregnant or breastfeeding women, patients with kidney disease or chronic illnesses, those with kidney failure, individuals allergic to nicotine, or those with low potassium levels (Demirezer, 2010). For all internal applications, if nausea, vomiting, or any other adverse effects occur, use should be discontinued immediately, and a physician should be consulted. In cases of suspected poisoning, appropriate detoxification or gastric cleansing procedures should be performed under medical supervision. Although folk knowledge includes various traditional methods, such as the use of salty ayran or saline water, or preparations of Kurtluca (*Teucrium scordium*) to induce vomiting, these should be approached with caution and not replace professional medical treatment (Özçelik, 2022; Özçelik, 2023b).
- When using herbal preparations, they should preferably be taken individually rather than in combination with other herbal products. In addition, herbal remedies should not be used concurrently with synthetic drugs, as potential interactions may alter their pharmacological effects. Only one herbal preparation per day is recommended, which may be accompanied by half to one cup of oil-based aromatic water. If an essential oil is to be consumed, the amount should not exceed a few drops per day. Moreover, no other medication or substance that could alter the oil's properties should be taken at the same time (Özçelik, 2022). It is essential to consult a physician before combining herbal and conventional treatments.
- Individuals using synthetic medications should avoid consuming substances that may cause pharmacological interactions, such as *Punica granatum* (Nar), *Citrus paradisi* (Greyfurt), *Citrus sinensis* (Kan Portakalı), as well as fried foods, tobacco, and alcohol (Özçelik, 2022; 2023a).
- As key components of urban open green spaces, plants are essential not only for their aesthetic value but also for the ecosystem services they provide. Medicinal and aromatic plants contribute significantly to landscape design through their distinctive leaf shapes, flower and fruit colours, and aromatic qualities. In recent years, the establishment of theme parks featuring medicinal and aromatic plants has increased in Türkiye. From a public health perspective, greater attention should be given to incorporating such plants into urban landscapes. However, thorny or poisonous species should be avoided, particularly in children's playgrounds (Özçelik, 2019; Şar, 2008).
- Combating diseases requires a holistic approach rather than focusing on individual patients,

diseases, or organs. In environments where radioactive leakage or toxic gases have been released into the atmosphere, treating each organ separately becomes ineffective. Similarly, instead of attempting to eliminate mosquitoes one by one, addressing the environmental conditions that enable the spread of malaria, such as stagnant water, represents a more comprehensive and sustainable strategy. The same principle applies to environmental health. In the 2000s, the establishment of a Vocational School in Atabey (Isparta), followed by the construction of dormitories and base stations nearby, was associated with the gradual withering of centuries-old juniper (*Juniperus excelsa*) trees in the adjacent cemetery. Likewise, resinous tree species such as cedar (*Cedrus libani*), black pine (*Pinus nigra*), and juniper (*Juniperus* spp.) in the forested areas near Kurucuova (Beyşehir) showed signs of damage after the installation of power transmission lines, while the effects on deciduous trees largely went unnoticed. These observations suggest that environmental degradation and electromagnetic exposure may adversely affect plant health, emphasizing the inseparable link between ecosystem integrity and public health (Özçelik, 2019). Power lines should be installed underground, and base stations near hospitals or schools should be relocated outside urban areas. Although Türkiye has sufficient regulations, violations are frequent; therefore, inspections should be strengthened (Özçelik, 2019).

- This study is expected to convey a message to researchers, policymakers, public health authorities, and agricultural and environmental institutions regarding the importance of protecting both human and environmental health.

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