

## **Traditional Medicinal Plants of K. Maras (Turkey)**

Sengul Karaman and Yusuf Ziya Kocabas

This paper presents a list of some medicinal and aromatic plants in the K.Maras province of Turkey. During the ethnobotanical survey of 88 plants belonging to 47 families were obtained in the period of 1999. It has been found that these plants are mostly used for antiseptic, diuretic, stomach and wound.

**Key words:** Folk medicine, medicinal plants, K.Maras, Turkey

Sengul Karaman  
Department of Biology,  
Faculty of Science,  
Kahramanmaras Sutcu  
Imam University,  
Karacasu-K.Maras/Turkey

E-mail:sengulk@mail.ksu.edu.tr

Department of Biology, Faculty of Science, Kahramanmaras Sutcu Imam  
University, Karacasu-K.Maras/Turkey

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### Introduction

Today there is a much renewed interest in searching of the plant kingdom for new medicines, agrochemicals and other marketable products. Many of the companies and institutions are involved in this new search and are using ethnobotanical information as the clue, to which plants are prime candidates for further screening and chemical analyses (Prance, 1991). Plants used for traditional medicines contain a wide range of substances to treat chronic as well as infectious diseases. The substances that can either inhibit the growth of micro organisms or kill them are considered for developing new drugs for treatment of various infectious diseases. Ethnobotany has recently been received much attention in science parts of the world and particularly in developing countries.

Herbal medicines have been improved in developing countries, as an alternative solution to health problems and costs of pharmaceutical products (Nimri *et al.*, 1999). Modern pharmacopoeia still contains at least 25 % drugs derived from plants. China, India, Sri Lanka and few other countries have official health care delivery systems. Herbal medicines have occupied an important position in India and China. Turkey has a great potential due to existing plant diversity in its natural flora and very distinct forms of primitive cultivars and land races (Tan, 1992; Sezik, 1991). In Turkey more than 500 plant (totally 10000 plants) species are used as medicinal and aromatic plants. Especially native people are still using the long traditional medicines. The Aim of this study was to carry out an ethnopharmacological survey which would enable a preliminary classification of the plants employed in traditional medicine.

### Materials and Methods

The research materials consist of plant specimens which were collected during the field studies of K. Maras provinces at different vegetation periods in 1999. Plant materials were deposited at department of Biology, Faculty of Science, University of K.S.U. The identification of specimens was carried out using Flora of Turkey (Davis, 1982).

The research area in K. Maras, in South East Mediterranean Region, (altitude 37° 36' N and longitude 37° 56' E and 568m above sea level) covered 23 forests and mountain villages. Our ethnopharmacological survey included Baskonus (1800m), Cimen (2300m) and Ahirdagi (2100m) mountains which are the highest points in area. The public survey was conducted in vegetation period of March-October.

Three main vegetation types can be distinguished in the study area: Macchie (from 500 to 980m), Forest (From 600 to 1800m and Steppe vegetation (mostly found just above the timberline at 1900m and at 1600m in the clearing forest) (Turkmen and Duzenli, 1998). The main characteristic of this area are dry summer, warm and rainy winters. The seasonal precipitation regimes during the year is as fallow; winter, spring, autumn and summer. It is a typical first variant of the East.

Some of the medicinal plants used in this area, have not been studied for their detailed antimicrobial and medicinal effects. This survey may assist the evaluation of medicinal plants before the implementation of any critical tests.

### Results and Discussion

This survey includes 88 plants representing 47 families. It was found that usually local plants were used for the treatment. Methods of preparation and uses were similar for many plants; tea, powder, or decoction (after boiling) from some parts of plants like root, fruit, seed and leaf. These plants were frequently used as a single and sometimes in mixture form.

Table 1 summarizes the data regarding 88 species claimed to have medicinal properties. The methods of preparation and use of the plant part employed are mentioned by Lipp (1989). References concerning similar uses and pharmacological evidence are listed for some species.

The plants with a wider geographical distribution were used by most native people in different areas. Most of the plants used were antiseptic (14 species), diuretic (27 species), stomach ache (27 species) and wound (14 species).

Table 1: Plant used in Folk medicine in K. Maras.

Sample number	Family; botanical name	Local name	Part Used	Claimed therapeutic uses
1	Anacardiaceae; <i>Rhus coriaria</i>	Sumak	Fruit	Antiseptic ( Nimri <i>et al.</i> 1999 )
2	Anacardiaceae; <i>Cotinus coggyria</i>	Duman ađaci	Leaf and bark	Antiseptic, antipyretic
3	Anacardiaceae; <i>Pistacia terebinthus</i>	Menengiç	Gum	Antiseptic, wound healing
4	Apiaceae; <i>Eryngium campestre</i>	Bođa diken	Leaves and root	Antiseptic, wound healing, diuretic, appetizing
5	Apiaceae; <i>Petroselinum crispum</i>	Maydanoz	Leaf	Diuretic, anti hypertension ( Ceylan, 1987 )
6	Asteraceae; <i>Artemisia absinthium</i>	Pelin otu	Leaf, flower	Antipyretic, wound healing, stomach
7	Asteraceae; <i>Chardinia orientalis</i>	Çađla otu	Whole plant	Stomach
8	Asteraceae; <i>Cichorium intybus</i>	Radika	Leaf, flower	Antipyretic, stomach, diuretic
9	Asteraceae; <i>Helichrysum plicatum</i>	Altin çiçeđi	Flower	Urinary dysfunction, Antifungal (Nakipoglu and Otan, 1994)
10	Asteraceae; <i>Taraxacum microcephaloides</i>	Hindiba	Leaf	Stomach, diuretic
11	Berberidaceae; <i>Berberis crataegina</i>	Kadin tuzluđu	Root	Diabetes
12	Betulaceae; <i>Alnus glutinosa</i>	Kizil ađaç	Leaf	Diuretic
13	Boraginaceae; <i>Alkanna orientalis</i>	Havaciva otu	Root	Menstruation dysfunction
14	Brassicaceae; <i>Capsella bursa-pastoris</i>	Çoban çantas	Whole plant	Menstruation dysfunction
15	Caryophyllaceae; <i>Saponaria officinalis</i>	Sabun otu	Body, root	Rheumatism, respiratory regulation, diuretic
16	Convolvulaceae; <i>Convolvulus arvensis</i>	Tarla sarmaşıđı	Root	Stomach
17	Crassulaceae; <i>Sedum album</i>	Dam kuruđu	Leaf	Wound healing
18	Cucurbitaceae; <i>Ecballium elaterium</i>	Esek hiyari	Seed	Diuretic, sinusitis
19	Cupressaceae; <i>Juniperus communis</i>	Ardiç	Seed	Urinary dysfunction
20	Cupressaceae; <i>Juniperus oxycedrus</i>	Ardiç	Resin	Antiseptic
21	Cuscutaceae; <i>Cuscuta epithymum</i>	Çin sađı	Body	Stomach
22	Elaeagnaceae; <i>Elaeagnus angustifolia</i>	İğde	Fruit	Antipyretic, diuretic
23	Equisetaceae; <i>Equisetum arvense</i>	At kuyruđu	Body	Stomach, diuretic, urinary dysfunction, wound healing, (Erol and Tuzlacı, 1996 )
24	Euphorbiaceae; <i>Euphorbia macrolada</i>	Sürleđen	Seed, latisfer	Stomach, jaundice
25	Fabaceae; <i>Glycyrrhiza glabra</i>	Meyan	Root	Respiratory regulation,
26	Fabaceae; <i>Ononis spinosa</i>	Kayiskiran	Whole plant	Analgesic, antiseptic, stomach, urinary dysfunction
27	Fagaceae; <i>Quercus infectoria</i>	Mese	Mazi	Stomach
28	Geraniaceae; <i>Pelargonium endlicherianum</i>	Solucan otu	Flower, leaf	Anthelmintic
29	Hypericaceae; <i>Hypericum perforatum</i>	Binbirdelik otu	Flower	Sedative, appetizing, cold, Wound healing, diuretic

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30	Capparidaceae; Capparis spinosa	Kebere	Buds	(Ahmad <i>et al.</i> , 1998 ). Stomach, appetizing, rheumatism
31	Juglandaceae; Juglans regia	Ceviz	Leaf	Antiseptic, hair restorer ( Sayar <i>et al.</i> , 1995 )
32	Labiatae; Marrubium vulgare	İt sineği	Flower, leaves	Analgesic, antipyretic, appetizing, stomach cough ( Yildirimli, 1991 )
33	Labiatae; Melissa officinalis	Oğul otu	Leaves	Antiseptic, cold, diabetes, antispasmodic (Ozguven and Kirici, 1999 )
34	Labiatae; Mentha longifolia	Nane	Whole plant	Antiseptic, stomach, carminative ( Tansi and Ozguven, 1995 )
35	Labiatae; Micromeria fruticosa	Taş nanesi	Whole plant	Stomach
36	Labiatae; Micromeria fruticosa	Taş nanesi	Whole plant	Carminative, Stomach, Appetizing ( Ozek <i>et al.</i> , 1991 )
37	Labiatae; Ocimum basilicum	Reşhan	Leaves	Stomach, cough, urinary dysfunction
38	Labiatae; Origanum onites	Kekik	Flower, leaves	Antiseptic
39	Labiatae; Salvia multicaulis	Ada çayı	Leaves	Wound healing
40	Labiatae; Salvia solarea	Adaçayı	Leaves, flowers	Stomach, cough
41	Labiatae; Salvia virgata	Ada çayı	Leaves	Wound healing
42	Labiatae; Sideritis syriaca	Dağ çayı	Whole plant	Diüretic, cough (Ezer <i>et al.</i> , 1996 )
43	Labiatae; Teucrium chamaedrys	Kısa mahmut	Flowers	Stomach, admonitory
44	Labiatae; Teucrium polium	Par yavşani	Flowers	Appetizing, diüretic ( Rustaiyan <i>et al.</i> , 2000 )
45	Labiatae; Thymus kotschyanus	Kekik	Whole plant	Antiseptic, sedative, diüretic
46	Labiatae; Thymus spyleus	Kekik	Whole plant	Antiseptic, sedative, diüretic, spasmolytic (Ş and Otan, 1994)
47	Labiatae; Ziziphora dinopodioides	Kir nanesi	Leaves	Antiseptic, stomach, appetizing
48	Liliaceae; Allium cepa	Soğan	Seed	Appetizing, diüretic
49	Liliaceae; Allium sativum	Sarımsak	Seed	Antiseptic, anti hypertension, heart regulation, appetizing
50	Liliaceae; Eremurus spectabilis	Çiris	Root	Scabies
51	Liliaceae; Hyacinthus orientalis	Sümbül	Bulb	Wound healing
52	Loranthaceae; Viscum album	Ökse otu	Leaf	Anti hypertension, cough
53	Malvaceae; Hibiscus esculantum	Bamya	Fruit	Diabetes, wound healing
54	Moraceae; Ficus carica	İncir	Fruit	Respiratory regulation, wound healing ( Nimri <i>et al.</i> 1999 )
55	Moraceae; Morus alba	Beyaz dut	Leaf	Antipyretic, diüretic
56	Moraceae; Morus nigra	Kara dut	Fruit, root	Respiratory regulation, diabetes, fever (Ahmad <i>et al.</i> , 1998)
57	Oleaceae; Olea europaea	Zeytin	Leaf, bark	Antipyretic, appetizing, depressor (Zeybek and Zeybek, 1994)
58	Paeoniaceae; Paeonia mascula	Ayi gülü	Root	Cough, sedative, epilepsy, respiratory regulation
59	Papaveraceae; Fumaria officinalis	Şahıtare	Flower, root	Antipyretic, stomach, appetizing, diüretic
60	Papaveraceae; Papaver rhoeas	Gelinlik	Flower	Respiratory regulation
61	Pinaceae; Pinus brutia	Kızıl çam	Resin	Analgesic
62	Plantaginaceae; Plantago major	Karaot	Leaf	Wound healing ( Bown, 1995 )
63	Platanaceae; Platanus orientalis	Çınar	Bark	Antiseptic (Nakipoglu and Otan, 1994)
64	Poaceae; Cydonia dactylon	Köpek dişi ayrığı	Rizom	Diüretic
65	Poaceae; Zea mays	Misir	Tuft, seed oil	Analgesic, diüretic
66	Portulacaceae; Portula oleracea	Semiz otu	Body	Anthelmintic, diüretic
67	Primulaceae; Primula vulgaris	Çuha çiçeği	Body	Diüretic
68	Punicaceae; Punica granatum	Nar	Fruit	Heart regulation, anthelmintic
69	Ranunculaceae; Adonis aestivalis	Keklik gözü	Flowers	Heart regulation, diüretic
70	Rhamnaceae; Paliurus spina-christi	Karaçali	Fruit	Stomach, diüretic, respiratory regulation
71	Rosaceae; Amygdalus communis	Badem	Seed oil	Rheumatism
72	Rosaceae; Cerasus mahaleb var. mahaleb	Mahlep	Seed oil	Diabetes, respiratory regulation,
73	Rosaceae; Cerasus vulgaris	Vişne	Seed oil	Diabetes, respiratory regulation,
74	Rosaceae; Crataegus monogyna	Aliç	Leaves, flowers	Analgesic, sedative, anti hypertension, heart regulation. ( Baytop, 1984 )
75	Rosaceae; Cydonia oblonga	Ayva	Seeds	Respiratory regulation,, stomach
76	Rosaceae; Geum urbanum	Bit otu	Root	Stomach
77	Rosaceae; Rosa canina	Kusburnu	Fruit	Diüretic ( Sayar <i>et al.</i> , 1995 )
78	Rosaceae; Sanguisorba minor	Küçük çayır düğmesi	Whole plant	Appetizing
79	Scrophulariaceae; Verbascum infidelium	Sığır kuyruğu	Flower	Respiratory regulation
80	Scrophulariaceae; Veronica cymbalaria	Yavşan otu	Flower, leaf	Stomach, diüretic
81	Solanaceae; Solanum dulcamara	Yaban yasemini	Flowering stems	Sedative, rheumatism
82	Solanaceae; Solanum nigrum	İt üzümü	Flowering stems	Analgesic, sedative (Zeybek and Zeybek, 1994)
83	Urticaceae; Urtica dioica	Isrgan	Leaves	Analgesic, rheumatism, diüretic, admonitory ( Baytop, 1984 )
84	Valerianaceae; Valeriana officinalis	Kedi otu	Root	Wound healing
85	Vidaceae; Viola odorata	Kokulu menekşe	Root	Diüretic
86	Vitaceae; Vitis vinifera	Asthma	Leaf	Wound healing
87	Zygophyllaceae; Peganum harmala	Üzerlik	Seed	Cold,
88	Zygophyllaceae; Tribulus terrestris	Demir dikenli	Whole plant	Heart regulation, diuretic ( Ahmad <i>et al.</i> , 1998 )

Because this area has different phytogeographic region, Irano-Turanian and Mediterranean, it has rich biological resources. Recently, the obtaining of medicinal plants, shown a remarkable increase in the use of drug, spice and drink industry. This situation results in narrowing of the species, even to the danger of extinction. This study agrees with the reports of Tan (1992), that transfer of these plant genetic resources to future generations, can only be possible by preserving them. In order to keep their existence it is essential to use consciously and would be cultivated medicinal and aromatic plants.

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