



Short communication

The Ethnobotanical Study of Medicinal Plants in (Dehe-lolo-vameghabad-bidoieh) Village. Kerman, Iran

Seyed Mohammad Ali Vakili Shahrabaki*

Department of Biology, Faculty of Basic Science, Jiroft Branch, Islamic Azad University, Kerman, Iran

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Abstract

Iran has a long history in the use of medicinal plants and traditional medicine. Local people in the villages, especially the elderly, have useful information about health benefits and how to use these plants. Therefore, it seems that collecting and recording this information leads to the revival of this traditional knowledge. The current research is an ethnobotanical study on the medicinal plants of (Dehe-lolo-vameghabad-bidoieh) village, belong to Kerman district, it lies between 25° 23' and 25° 34' N, latitude, and 88° 48' and 88° 59' E, longitude, elevation ranges, is from 1700 to 2700 meters, above mean sea level, average annual rainfall, is about 120 mm. In order to recognize custom, tradition, and application way, of plants by the people. In current study, plants species, were collected at several times, in 2014 year. Plants identities were confirmed by botanist and references and analyze was made of the species used. The Raunkiaer classification was applied to classify the plant life forms. To identify the medicinal plants, and how to use them, the traditional botanists and native people were interviewed and a few questions were raised. Results indicated some of medicinal plants, are used commonly by the indigenous people, many of medicinal plants, are used for eliminating different pains. Overall, in this survey, identified and analyzed the 84 medical species, belong to 38 families and 76 genera. The maximum range, of medicinal plants in area, are families Asteraceae, (10 species) and Lamiaceae, (8 species). The species plants of the genus *Artemisia* and *Asteragalus*, constitute the dominant genus of area. The most of consumed medicinal plants, between indigenous area, containing the genus: *Thymus*, *Achilleae*, *Ziziphora*, *Alyssum*, *Descurainia*, and *cichorium*. Also Plants vegetation this area, generally, belonging to Irano-turanian region. Medicinal plants in region, determinate, as 34.3% of species are hemycryptophyte, 25% therophyte, 19.2% phanerophyte, 16.2% chamephyte, and 5.3% geophyte.

Keywords: Ethnobotany, Kerman, Local people, Medicinal plants

Introduction

Nowadays, medicinal plants, with respect to a special place in community health, have attracted special attention from scientific and research centers. Due to the rich flora of Iran as well as Iran's rich culture and knowledge among different populations, and given that traditional botany offers valuable ways for finding new medicinal plants, paying attention to this science is of utmost importance [1]. Ethnobotanical studies provide

traditional data for traditional use of natural resources and effective protection of biodiversity [2]. So far, few studies have been conducted on the ethnobotany of medicinal plants in the country, some of which are as follows: Sirjan [3], Ilam [4], Kashan [5], Kalmand Bahadoran and Bafgh [6], Sistan [7], and Natanz Kashan [8]. Information from the natives can play an important role to produce chemotherapeutic agents. (Dehe-lolo-vameghabad-bidoieh) village, belong to Kerman district, it lies between 25° 23' and 25° 34' N,

* Corresponding author: Department of Biology, Faculty of Basic Science, Jiroft Branch, Islamic Azad University, Kerman, Iran

Email Address: Mohammadvakili72@yahoo.com

latitude, and 88° 48' and 88° 59'E, longitude, elevation ranges, is from 1700 to 2700 meters, above mean sea level, average annual rainfall, is about 120mm. [9]. This region is also regarded as one of the province's resorts, having beautiful landscapes and pleasant climate. Due to the permanent residence of villagers and indigenous knowledge of people living in this region, research on traditional medicine is of utmost necessary. The aim of this study was to identify different medicinal plants and the indigenous knowledge of local people in the study area.

Materials and Methods

Study Area

(Dehe-lolo-vameghabad-bidoieh), belong to Kerman district, it lies between 25° 23' and 25° 34' N, latitude and 88° 48' and 88° 59' E, longitude, elevation ranges, is from 1700 to 2700 meters above mean sea level, average annual rainfall, of about 120mm average. This region is also regarded as one of the province's resorts, having beautiful landscapes and pleasant climate. (Fig. 1)

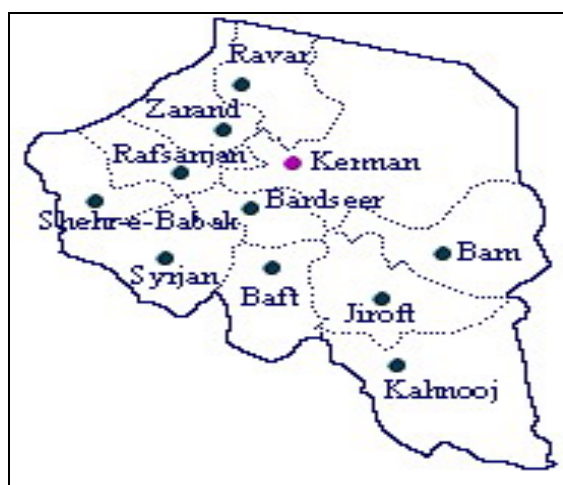


Fig. 1 The map of study area

Methods

Plants samples, were collected, during the growing seasons, in 2014 year. After drying, and collection of Samples, by using conventional methods, plant species, identified, by using the Flora Iranica [10], Flora of Iraq [11], Flora of Iran [12], Flora of Iran colored [13], Flora of Palestine [14], Flora of Turkey [15], Medicinal and Aromatic plants [16], Herbal drugs and Traditional Medicine [17], Medicinal Plants [18]. Education herbal plants used in the prevention and treatment of disease [19].

The Raunkiaer classification was applied to classify the plant life forms [20]. To identify the medicinal plants, and how to use them, and *Parts used*, *Santal name*, *Diseases to be treated* the traditional botanists and native people were interviewed and a few questions were raised. Plant samples are now in the herbarium of Agricultural and Natural Resources Research Center, Kerman.

Results and Discussion

Generally, in this study, 85 medicinal species were identified (Table 1). Most of the medicinal plants of the study area are related to Asteraceae and Lamiaceae families. Plant species from *Asteragalus* and *Artemisia* genera are the dominant vegetation cover in the study area. Drought and overgrazing have led to reduce the number of medicinal plants. According to ethnobotanical studies among the natives, most of the plants used in traditional medicine in the Dehlo-lo village include species from *Thymus*, *Achillea*, *Ziziphora*, *Alyssum*, *Descurainia* and *Cichorium* genera. The people of this area use *Peucedanum aucheri* for increasing breast milk and menstruation, *Ajwain* for the treatment of bloat, *mallow* for the treatment of cough, *Nigella sativa* for the treatment of asthma and diabetes and high blood pressure, and *Alhaji* to produce manna. *Cumin* is used for the treatment of kidney stones as an anti-spasmodic and carminative, *plantain* for hoarseness, and *fleawort* for anemia. is used to make soup and *carnation* is applied in tooth pain relief. The dominance of grasses in the region seems to be largely associated with heavy grazing, drought, climatic factors, and topography of the region. It should be noted that most uses of medicinal plants in this area, such as the Sirjan, Kerman province [3], relating to the stomach and the intestines. Furthermore, *Cherry tails* and tassel are used for the treatment of kidney and bladder stones, which is currently used in this village and in most parts of Iran. *Adiantum capillus-veneris*, *Dill*, *Barberry*, and *Sisymbrium irio* are well known for many people in Kerman province as well as in the study area, and in terms of traditional medicine, elderly and rural residents use these species. Herbalists also recommend them. In many cases, there are similarities between the indigenous beliefs to the medicinal plants in this area and other researches performed in other cities like Kashan [5], Bafgh [6], Sistan [7], and Natanz [8].

Table 1 List of medicinal plants used by (Dehe-lolo –vameghabad-bidoieh), Kerman, Iran

Row	Scientific name	Family	Parts used	Santal name	Diseases to be treated	Biological form
1	<i>Amaranthus graecizans</i> L.	Amarantaceae	Leave, Seed	Sorkh-talkh	Chest pain	Th
2	<i>Ixiolirion tataricum</i> (pall.) Schult. & Schult.f.	Amarillydaceae	Leave, Seed	Khiaarak	Chest pain	Th
3	<i>Pistacia atlantica</i> Desf.	Anacardiaceae	Fruits, Bark, Leaves	Beneh	Joint pain, Diuretic, Nerves Rickets	Ph
4	<i>Pistacia khinjuk</i> Stocks.		Fruits, Gum	Khengok	Astringent	Ph
5	<i>Anethum graveolence</i> L.	Apiaceae	Whole plant	Shavid	Blood purification	He
6	<i>Prangos cheilanthifolia</i> Boiss.		Essential oil	Gashi	Diuretic	Ge
7	<i>Nerium indicum</i> Mill.	Apocynaceae	Leaves	Gish-barg	Treatment of Skin diseases	Ch
8	<i>Calotropis procera</i> (Aiton) Dryand	Asclepiadaceae	Latex	Estabragh	Rheumatic fever, Leprosy	Ch
9	<i>Artemisia santolina</i> Schrenk.	Asteraceae	Flower, Leaves, Stem	Ddormaneh	Ear lesion	Ch
10	<i>Artemisia sieberi</i> Besser.		Flower, Leaves, Stem	Dormaneh	Indigestion	Ch
11	<i>Carthamus oxyacantha</i> M. Bieb		Flower, Seed oil	Golrang	Antioxidants, Strengthening the nerves	Th
12	<i>Cichorium intybus</i> L.		Root, Leaves, Flower	Kasny	Anemia, Diuretic	He
13	<i>Gundelia tournefortii</i> L.		Flower	Shekar-koh	Dysuria	He
14	<i>Onopordum carmanicum</i> (Bornm.) Bornm.		Root, Leaves, Flower	Khazane-baba	Gastric pain-Diuretic	He
15	<i>Tragopogon caricifolius</i> Boiss.		Leaves, Latex	Sfelang	Conditioner	He
16	<i>Echium amoenum</i> Fisch. & C. A. Mey	Boraginaceae	Flower	Gole-gavzabon	Urea Reduction	He
17	<i>Borago officinalis</i> L.		Flower	Gavzaban	Amplification of vision, Blood cholesterol	Th
18	<i>Onosma stenosphon</i> Boiss.		Leaves, Root	Hochareh	Strengthening the nerves	Ch
19	<i>Alyssum marginatum</i> Steud. ex BOISS.	Brassicaceae	Seed	Ghodomeh	Expectorant-Angina	Th
20	<i>Cardaria draba</i> (L) Desv.		Leaves, Seed	Moko	Diuretic	Th
21	<i>Descurainia Sophia</i> (L) Schur.		Seed	Khakeshy	Anti-scurvy, Astringent,	Th
22	<i>Sisymbrium loeselii</i> L.	Brassicaceae	Leaves, Stem	Khakeshy-talkh	Indigestion	Th

23	<i>Capparis spinosa</i> L.	Capparidaceae	Flower, Buds, Root, Stem	Kavar	Antifungal-Hypoglycemic	Ch
24	<i>Acanthophyllum glandulosum</i> Bunge.ex Boiss.	Caryophyllaceae	Root	Chobak	Rheumatic fever	Ch
25	<i>Chenopodium album</i> L.	Chenopodiaceae	Leaves, Fruits	Salmeh	Anti-worm	Th
26	<i>Chenopodium botrys</i> L.		Stem, Flower	Salmeh	Anti-worm	Th
27	<i>Salsola kali</i> Lsubsp.iberica Sennen & pau..		Whole plant	Alafe-shor	Laxative- Diuretic-Anti- worm, Blood purification,	Th
28	<i>Convolvulus arvensis</i> L.	Convolvulaceae	Whole plant	Pich-picho	Diuret c,	Ch
29	<i>Cressa cretica</i> L.		Whole plant	Plase-morcheh	Anti-worm, Anti, bacteria-Anti Asthma - Expectorant,	He
30	<i>Ephedra pachyclada</i> Boiss.	Ephedraceae	Stem, Gum	Ormak	Hay fever, Asthma, Anfolanza, Rheumatic fever	Ch
31	<i>Euphorbia densa</i> Schrenk.	Euphorbiaceae	Root, Latex	Farfion	Headache-Waist pain	Th
32	Alhagi persarum Boiss. & Buhse.	Fabaceae	Leaves, Branches	Kharshotor	Diuretic, Blood purification, Anti, bacteria-hemorrhoid	He
33	<i>Glycyrrhiza glabra</i> Lvar. glabra.		Root	Motky	Anti-Asthma	He
34	<i>Medicago sativa</i> L.		Whole plant	Yongeh	Kidney diseases	He
35	<i>Melilotus officinalis</i> (L.) Desr.		Stem, Flower juice	Zard-yongeh	Anemia, Blood inner	Th
36	<i>Onobrychis altissima</i> Grossh.		Stem, Flower	Speres	Anemia, Strengthening the nerves	He
37	<i>Sophora alopecuroides</i> L.		Root, Seed	Talkkeh-bayan	Detoxification, Treat inflammation	Ge
38	<i>Fumaria parviflora</i> Lam.	Fumariaceae	Whole plant	shahtareh	Strengthening the gums	Th
39	<i>Geranium rotundifolium</i> L.	Geraniaceae	Stem, Leaves	Sozano	Anemia-Wound treatment,	Th
40	<i>Juglans regia</i> L.	Juglandaceae	Seed	Jovz	Reduce Blood Sugar	Ph
41	<i>Marrubium vulgare</i> L.		Seed	Gandenaye-kohy	Anti-bacterial	He
42	<i>Mentha longifolia</i> (L). Huds.		Leaves	Poneh	Antiemetic, Anti-asthma	Ge

43	<i>Nepeta persica</i> Boiss.	Lamiaceae	Essential oil	Melango	Expectorant cough	He
44	<i>Otostegia persica</i> (Burm.) Boiss.		Leaves, Flower	Goldar	Antibacterial	He
45	<i>Salvia nemorosa</i> L.		Leaves, Flower	Maryam-goly	Menstrual disorder	He
46	<i>Stachys setifera</i> C.A.Mey		Essential oil	Salbeh	Strengthening the nerves	He
47	<i>Teucrium polium</i> L.		Leaves, Flower, Stem	Kalporeh	Diabetes, Malaria fever, Inflammatory bowel	He
48	<i>Thymus caramanicus</i> Jalas.		Whole plant	Avishan	Tonic	He
49	<i>Ziziphora clinopodioides</i> Lam.	Lamiaceae	Leaves, Flower	Avishanekohy	Strengthening the nerves	He
50	<i>Ziziphora tenuir</i> L.		Leaves	Avishane-barik	Headache	Th
51	<i>Allium stamineum</i> Boiss.	Alliaceae	Leaves	Piaze-dashty	Bronchitis	Ge
52	<i>Colchicum schimperi</i> Janka.		Flower, Onions, seed	Golehasrate-yazdy	Reduce inflammation and pain	Ge
53	<i>Linum album</i> Ky.ex Boiss.	Linaceae	Seed	Ketane--safid	Anticancer	Th
54	<i>Alcea aucheri</i> (Boiss.) Alef.	Malvaceae	Flower, Fruits	Gole-khatmy	Chest pain	He
55	<i>Malva neglecta</i> Wallr.		Leaves, Flowe , Stem	Panirak	Reproduction	He
56	<i>Malva sylvestris</i> L.		Whole-plant	Tokhme-kharo	Anti-cancer, antioxidants	He
57	<i>Ficus carica</i> L.	Moraceae	Bark, Leaves, Root, Fruits	Angir	Anti-cancer, With antioxidants	Ph
58	<i>Morus alba</i> L.		Latex, Leaves, Fruits	Tot	Diabetes	Ph
59	<i>Olea europaea</i> L.	Oleaceae	Fruits, Leaves, Seed oil	Zeyton	Fever- Laxative-EnergySector-Urinary Infection	Ph
60	<i>Plantago lanceolate</i> L.	Plantaginaceae	Leaves, Fruits	Barhange-sarneyzehy	Anti-inflammatory , Safety-power,-amplifier	He
61	<i>Plantago major</i> L.		Leaves, Root , Seed	Barhange-kabir	Excretion of, intestinal ormsw, Sexual enhancement	He
62	<i>Acantholimon festucaceum</i> jaub &SPACH) Boiss.	Plumbaginaceae	Leaves, Root, Seed	Kolahe-mir-hasan	MS-treatment	He

63	<i>Rumex vesicarius</i> L.	Polygonaceae	Flower- Root	Torshehe-alo	Bloat, Hiccup, Indigestion, Constipation,	He
64	<i>Avena wiestii</i> Steud.	Poaceae	Seed	Gove-do-sar	Diabeate, Cholesterol	Th
65	<i>Consolida orientalis</i> (Gay) Schrod.	Ranunculaceae	Whole-plant	Zaban-pas-ghafa	Anti-worm, Kidney Stones	Th
66	<i>Ziziphus spina-chirstii</i> L.	Rhamnaceae	Fruits, Leaves, Seed, Essential	Konar	Anti-cancer, Obesity, With Antioxidan	Ph
67	<i>Amygdalus scoparia</i> Spach.	Rosaceae	Fruits	Alok	Eczema	Ph
68	<i>Ceracus vulgaris</i> Miller.		Fruits	Gila	regulation of, blood-salts , Strengthening the nerves	Ph
69	<i>Cotoneaster persica</i> Pojark.		Fruits-seed	Shirkhesht	Bladder problems	Ph
70	<i>Cydonia oblonga</i> Mill.		Fruits-seed	Beh	Pertussis	Ph
71	<i>Rosa beggeriana</i> Schrek.		Flower, Essential oil	Korik	Kidney-inflammation-treatment	Ph
72	<i>Sanguisorba minor</i> Scop.		Fruits	Gheytdaran	Kidney inflammatio Neurologic, treatment	Ch
73	<i>Populous euphratica</i> Olivier.	Salicacea	Flower, Root	Senovbar	Intestinal Discomfort, Sweaty, hands and feet	Ph
74	<i>Salix aegyptiaca</i> L.		Leaves, Flower	bidmeshk	Fever	Ph
75	<i>Verbascum sinuatum</i> L.var.sinuatum	Scrophulariaceae	Leaves, Flowe, Root	Ger-ghok	Asthma,,chronic of cough, pneumonia	He
76	<i>Veronica anagalis-aquatica</i> L.		Whole plant	Sizab	Tonic, Diuretic, Sedative	He
77	<i>Daphne mucronata</i> Royle.	Thymelaceae	Fruits, Leave, Seed	Dafneh	Gonorrhea- treatment laxative	Ph
78	<i>Solanum nigrum</i> L.	Solanaceae	Leaves	Bazrolbang	Eye pain	Ch
79	<i>Vitis vinifera</i> L.	Vitaceae	Leaves, Fruits	Raz	Blood purification	Ph
80	<i>Peganum harmala</i> L.	Zygophyllaceae	Seed	Dashty	Rhumatism, Sedative, Jaundice, anti-worm	Th
81	<i>Tribullus terresteris</i> L.		Leaves, Root, Fruits	Khar-khesak	Kidney Stones	Th

The life forms, of medicinal plants in region, determinate, as 34.3% of species, are hemycryptophyte, 25% therophyte, 19.2% phanerophyte, 16.2% chamephyte, and 5.3% jeophyte. Therophytes high rate (25%) who have a very short growing season is indicate. The desert and semi-desert climate, high percentage of hemicryptophyte (34.3% percent). also shows the harsh conditions of life. The variety forms of chamephyte, in mountain have crucial role, in stabilizing the soil particularly in slope location [20].

Also, according to the results obtained in the present study, with presence of 84 plants species, in an area of 10,000 hectares, it can be predicted, that the area is contain of good diversity, the reason such diversity, probably can be found in the environment and geographic condition of area, because the area affected, by the climate of Iran Turani, and other climate, and is also influenced, by other elements of the plant.

Conclusion

In current study, plants species were collected, at several times, in 2014 year. Plants, identities were confirming by botanist, and references and analyze, was made of the species, used in total, 84 medicinal plant species, collected and identified in (Dehe-lolo-vameghabad-bidoieh) area. Results indicated some of medicinal plants are used commonly by the indigenous people, many of medicinal plants, are used for eliminating different pains. The life forms, of medicinal plants in region, determinate, as 34.3% of species, are hemycryptophyte, 25% therophyte, 19.2% phanerophyte, 16.2% chamephyte, and 5.3% jeophyte. Generally, some of uses were found to be new, when compared with published literature, on ethno medicine, of Iran

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