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The ethnobotanical notes from Nizip (Gaziantep-Turkey)

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ABSTRACT

This paper reports folk medicinal and food plants of Nizip (Gaziantep) located in the south part of Turkey. The purpose of the study is to gather, determine, and record the plants that are used as source of food and medicine by local people. The information was obtained from participants in face to face interviews; furthermore, the specimens of the plants were collected. Voucher specimens were deposited at the Herbarium of the Faculty of Pharmacy, Marmara University. Totally, twenty-seven plants are recorded as used as traditional folk medicine for the region, and thirteen of these are also used as a source of food. Among them, 20 taxa were wild and 7 taxa were cultivated plants. According to the majority of the plants which have similar usage, the plants are mostly used for gastrointestinal, respiratory system diseases and diabetes.

Keywords: Ethnobotany, folk medicinal plants, food plants, Nizip, Turkey

INTRODUCTION

Turkey has a rich traditional culture because the country is located in region where the effect of lots of civilization was observed. The important part of this culture include nutrition plants that can be eaten and folk medicine (Bulut, 2016). This riches is displayed with ethnobotany researches which is done in different regions of Turkey. Nizip where we performed preliminary researches take part in the east of Turkey but there isn't enough work in the region (Akan et al. 2008; Altundağ and Öztürk 2011; Bulut et al. 2016; Çakılcıoğlu and Türkoğlu 2010; Çakılcıoğlu et al. 2010, 2011; Doğan and Tuzlacı 2015; Kaval et al. 2014; Mükemre et al. 2015; Özgen et al. 2004; Özgökçe and Özçelik 2004; Sezik et al. 1997; Şığva and Seçmen 2009; Tabata et al. 1994; Tetik et al. 2013; Tuzlacı and Doğan 2010; Yeşil and Akalın 2009).

Nizip is situated (37°00'36"N 37°47'50"E) in the southern part of Turkey at an altitude 400 m above sea level (Figure 1). It covers an area of 1.031 km^2 and its population is 109.285. Nizip is surrounded by Yavuzeli in the north, Karkamış in the south, Birecik (Şanlıurfa) in the east and Şehitkamil and Oğuzeli in the west. The main crops of Nizip are olive and pistachio. Also, Zeugma ancient city that is located 10 km from Nizip has a historical importance in the region.

MATERIALS AND METHODS

This ethnobotanical study addresses the use of wild plants as a source of food and medicine. The study was made in 2012 and its materials were the plants (27 taxa) collected during the field work. The information was obtained through open and semi-structured interviews from the local people (Alexiades 1996; Cotton 1996; Martin 1995) with local people. The interviews were made as general conversations with a strict questionnaire (Appendix 1). The information about the local names, the part(s) used, the ailments treated, the therapeutic effect, the preparation, the methods of administration, and the duration of treatment was recorded. The "Flora of Turkey and the East Aegean Islands" (Davis 1965-1985; Davis et al. 1988; Güner et al. 2000) were mainly used for the identification of the plants. The plant specimens are kept in the Herbarium of the Faculty of Pharmacy, Marmara University (MARE).

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Table 1. Medicinal and food plants of Nizip (Gaziantep-Turkey)

Botanical name, Family and Specimen number	Local name	Plant part used (medicine)	Ailments treated/ Therapeutic effect	Preparation and Administration	Plant part used (food)	Modes of consumption	References
Alcea dissecta (Baker) Zohary (Malvaceae, MARE 15333)	Hatmi çiçeği	Flowers Flowers	Cough Gastro-intestinal disorders	Infusion, int. Infusion, int.			(15, 2)[b]
Astragalus lamarckii Boiss. [*Astracantha lamarckii* (Boiss.) Podl.] (Fabaceae, MARE 15337)	Geven	Aerial parts	Cold	Infusion, int.			
Capparis spinosa L. (Capparaceae, MARE 15329)	Kember	Gemmae Flowering branches	Rheumatism Expectorant	–, eaten Decoction, int.			(2)[b]
[a] *Cupressus sempervirens* L. (Cupressaceae, MARE15345)	Çam	Leaves & branches Cones	Constipation Enuresis nocturna	Decoction, int. Decoction, int.			
Ficus carica L. subsp. carica (Moraceae, MARE 15356)	İncir	Latex Dried fruits	Wart Constipation	–, ext. –, ext.	Fruits	Eaten raw, jam	(2)[b]
[a] *Hibiscus esculentus L.* [Abelmoschus esculentus (L.) Moench] (Malvaceae, MARE 15353)	Bami	Flowers Flowers	Constipation Gastro-intestinal	Decoction, int. Decoction, int.	Fruits	Cooked	
[a]*Juglans regia L.* (Juglandaceae, MARE15351)	Ceviz	Leaves Seed	Diabetes Dysmnesia	Decoction, int. –, eaten	Seed	Eaten raw	Diabetes (14) (2, 6, 8, 10, 11, 13, 15, 16)[b],
Lactuca serriola L. (Asteraceae, MARE 15338)	Şirok	Aerial parts Aerial parts Aerial parts Aerial parts	Liver diseases Kidney ailments Digestive Expectorant	Decoction, int. Decoction, int. Decoction, int. Decoction, int.			(4, 12, 14,)[b]
Mentha longifolia (L.) Hudson subsp. *typhoides* (Brig.) Harley var. *typhoides* (Lamiaceae, MARE 15335)	Punk	Aerial parts Aerial parts Aerial parts	Cold Appetizer Gastrointestinal disorders	Infusion, int. Infusion, int. Infusion, int.	Aerial parts	Spice	Cold (2, 10, 13) Gastrointestinal system diseases (16, 11) (3, 4, 5, 6, 8, 15)[b] Spice (3, 9)
[a]*Olea europaea* L. var. *europaea* (Oleaceae, MARE 15336)	Zeytin	Leaves Leaves Leaves Fruits	Appetizer Diabetes High cholesterol Constipation	Decoction, int. Decoction, int. Decoction, int. Olive oil, eaten	Fruits Fruits	Eaten raw Pressed into oil	(11, 12)[b]
Pistacia khinjuk Stocks (Anacardiaceae, MARE 15352)	Menengiç	Fruits	Cold	Ground and make a coffee, int.			(1)[b]
[a]*Pistacia vera* L. (Anacardiaceae, MARE 15346)	Antep fıstığı	Fruit Resina	Diabetes Stomach ulcer	–, eaten –, int.	Seed	Eaten raw	(12)b1 Eaten raw (12)
Platanus orientalis L. (Platanaceae, MARE 15355)	Çınar	Leaves Leaves Leaves	Calcification Antipyretic Toothache	Decoction, int. Decoction, int. Decoction, gargle			(12,14)[b]
Portulaca oleracea L. (Portulacaceae, MARE 15332)	Pirpirin	Aerial parts	Gastrointestinal disorders	Decoction, int.	Aerial parts Aerial parts	Boiled then salad (+ yogurth) Salad	Gastro-intestinal disorders (14) (2, 3, 5)[b] Salad (3, 12)
Punica granatum L. (Punicaceae, MARE 15348)	Nar ağacı	Seed Seed Seed	Constipation Cold Anthelmintic	–, eaten –, eaten –, eaten	Seed Seed	Eaten raw Squeezed ("nar ekşisi") then added in salad	

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Quercus brantii Lindley (Fagaceae, MARE 15344)	Palamut ağacı Mature fruits Mature fruits	Leaves Diabetes Diarrhea	Itching Crushed, int. Crushed, int.	Decoction, ext.	Fruit	Roasted	Diabetes (15)
Rhus coriaria L. (Anacardiaceae, MARE 15342)	Sumak	Leaves & branches Fruits	Diabetes Appetizer	Decoction, int. Decoction, int.	Fruit	Crushed then added in salad	(2, 6, 13)[b]
Rubus sanctus Schreber (Rosaceae, MARE 15347)	Böğürtlen	Fruits Fruits	Cough Respiratory system diseases	Jam, eaten Jam, eaten	Fruit	Eaten	Respiratory system diseases (14) (2, 5, 6, 12)[b]
Salix acmophylla Boiss. (Salicaceae, MARE 15341)	Biy ağacı	Leaves	Rhematism	Decoction, int.			
Solanum nigrum L. subsp. *schultesii* (Opiz) Wessely (Solanum decipiens Opiz) (Solanaceae, MARE 15343)	Köpek domatesi	Aerial parts	Eye diseases	Burned, steam bath			
[a]*Sorghum bicolor* (L.) Moench (Poaceae, MARE 15354)	Süpürge bitkisi	Fruits	Diarrhea	Roasted, eaten			
Teucrium polium L. (Lamiaceae, MARE 15338)	Murad	Aerial parts Aerial parts Aerial parts	Stomach diseases Appetizer Diabetes	Infusion, int. Infusion, int. Infusion, int.			Stomach diseases(15, 2) Diabetes (2, 6, 8, 14, 16)
Thymbra spicata L. var. *spicata* (Lamiaceae, MARE 15331)	Zahter	Aerial parts Aerial parts Aerial parts	Stomach diseases Appetizer Cold	Infusion, int. Infusion, int. Infusion, int.			(2)[b]
Tribulus terrestris L. (Zygophyllaceae, MARE 15339)	Pıtrak	Aerial parts	Kidney stones	Decoction, int.			(2, 11, 12, 14)[b]
Verbascum sp. (Scrophulariaceae, MARE 15340)	Zarmasi	Flowers & leaves Flowers & leaves Flowers & leaves	Wound Sore throat Cough	Crushed, ext. Infusion, int. Infusion, int.			
Vitex pseudo-negundo (Hausskn. ex Bornm.) Hand.-Mazz [*Vitex agnus-castus* L. –Lamiacaeae] (Verbenaceae, MARE 15330)	Süpürge bitkisi	Flowering branches	Cold	Decoction, int.			
Zea mays L. subsp. *mays* (Poaceae, MARE 15349)	Darı	Stylus	Kidney stones	Decoction, int.	Fruit Fruit	Boiled/ Roasted Grinded for making flour ("mısır unu")	Urinary system diseases (3) (10)[b]

Int.: Internal use; Ext.: External use; [a]Cultivated plant; [b]Different usage – Directly usage; (1) Akan et al. 2008; (2) Altundağ and Öztürk 2011; (3) Bulut et al. 2016; (4) Çakılcıoğlu and Türkoğlu 2010; (5) Çakılcıoğlu et al. 2010; (6) Çakılcıoğlu et al. 2011; (7) Doğan and Tuzlacı 2015; (8) Mükemre et al. 2015; (9) Özgen et al. 2004; (10) Özgökçe and Özçelik 2004; (11) Sezik et al. 1997; (12) Şığva and Seçmen 2009; (13) Tabata et al. 1994; (14) Tetik et al. 2013; (15) Tuzlacı and Doğan 2010; (16) Yeşil and Akalın 2009.

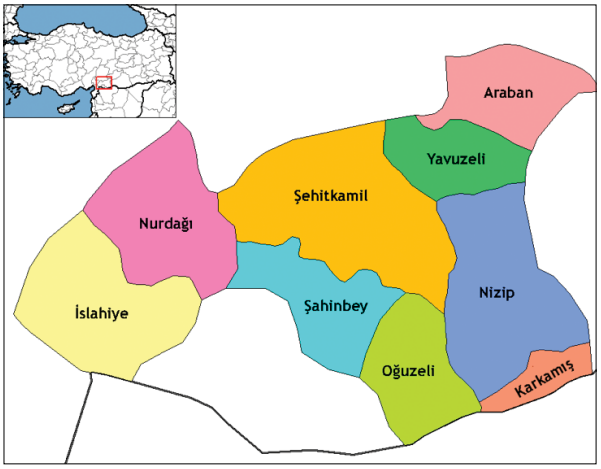

Figure 1. Map of Gaziantep (www.türkiyerehberi.com)

Figure 2. *Pistacia vera* L.

RESULTS AND DISCUSSION

The plants used for medicinal purposes in Nizip are presented in Table 1. Taxonomical changes according to the plant list (http://www.theplantlist.org) were shown in parenthesis in Table 1 together with the popular scientific names. Twenty-seven medicinal plant species, belonging to 11 families, were recorded in the research area. Of these, 20 taxa were wild, and 7 taxa were cultivated plants (Figure 2). The most common usages of the plants were found to be gastrointestinal, respiratory system diseases and diabetes.

The main preparation methods was decoction and usually aerial parts were used in the preparation.

We compared our results with other comprehensive ethnobotanical studies on folk medicinal plants which have already been carried out in the neighbouring areas (Akan et al. 2008; Altundağ and Öztürk 2011; Bulut et al. 2016; Çakılcıoğlu and Türkoğlu 2010; Çakılcıoğlu et al. 2010, 2011; Mükemre et al. 2015; Özgen et al. 2004; Özgökçe and Özçelik 2004; Sezik et al. 1997; Şığva and Seçmen 2009; Tabata et al. 1994; Tetik et al. 2013; Tuzlacı and Doğan 2010; Yeşil and Akalın 2009) and presented in Table 1. Among them, *Juglans regia* L., *Mentha longifolia* (L.) Hudson, *Rubus sanctus* Schreber and *Teucrium polium* L. recorded in eight localities were the most commonly used herbal medicinal plants in Nizip and its surroundings.

Thirteen taxa used medicinally (*Ficus carica* L. subsp. *carica, Hibiscus esculentus* L., *Juglans regia* L., *Mentha longifolia* (L.) Hudson subsp. *typhoides* (Brig.) Harley, *Olea europaea* L. var. *europaea, Pistacia vera* L., *Portulaca oleracea* L., *Punica granatum* L., *Quercus brantii* Lindley, *Rhus coriaria* L., *Rubus sanctus* Schreber, *Thymbra spicata* L. var. *spicata* and *Zea mays* L. subsp. *mays*) were also used as food plants.

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Appendix 1

Questionnaire Form

1. Name and surname of the participant
2. Age and sex of the participant
3. Telephone and address of the participant
4. Educational level of the participant
5. Date of interview
6. Place of residence of the participant
7. Duration of residence of the participant
8. Local name of the plant
9. Human health or animal health
10. Ailments treated /therapeutic effect
11. Plant part used
12. Preparation
13. Administration
14. Dosage
15. Duration of treatment
16 Age group of patients (baby, children, adults)
17. Side effect
18. Different ethnobotanical use