Indian Journal of Traditional Knowledge
Vol 21(3), July 2022, pp 569-582

Wild edible plants contributing to the traditional foods of Mardin (Turkey) Province

İbrahim Demir[a,]* & Nevzat Ayaz[b]

[a]Bitlis Eren University, Faculty of Arts and Sciences, Department of Biology, 1300, Bitlis, Turkey
[b]Yeşilli (Mardin) Directorate of Agriculture and Forestry, 47650, Mardin, turkey

E-mail: hosap65@gmail.com

Received 26 November 2020; 14 June 2022

This study comprises the ethnobotanical investigation of wild edible plants that contribute to the creation of the gastronomic image of Mardin cuisine. The edible plants specific to the region were determined and the local uses made with these plants were recorded. The studies were carried out in 56 neighborhoods with high ethnobotanical potential in 9 districts of Mardin in 2019 and 2020. Plant samples distinguished as a result of interviews with a total of 202 participants were collected and classified. It was determined that 117 taxa belonging to 34 families and 92 genera were utilized for food purposes as a result of the study. The use of 26 taxa as the food was recorded for the first time. Also, 4 of the taxa used are endemic. Among the endemics, the use of *Centaurea sclerolepis* Boiss. and *Stachys menthoides* Kotschy & Boiss. as food was recorded for the first time. In addition, the Use Value (UV) index and Informant consensus factor (ICF) was calculated. Taxa with the highest UV value are as the following: *Gundelia mesopotamica* Fırat (UV: 0.81), *Malva neglecta* Wallr. (0.74), *Rumex crispus* L. (0.54), *Notobasis syriaca* (L.) Cass. (0.44), *Silybum marianum* (L.) Gaertn., *Onopordum carduchorum* Bornm. & Beauverd (0.40), *Sinapis arvensis* L. (0.34) and *Urtica dioica* L. (0.33). ICF ranges from 0.83 to 0.97 based on use reports against each usage category. Pickle had the highest ICF value (0.97) seasonings and beverages, the lowest ICF value was recorded (0.83).

Keywords: Anatolia, Edible plants, Mardin, Traditional knowledge

IPC Code: Int Cl.[22]: A01H 6/14, A23L 2/02, A23L 19/00, A23 L 23/00, A23L 27/00, G01N 33/02

Wild edible plants have played a very significant role in the food system since the emergence of human civilization[1,2].

Since prehistoric times, wild plants have played an essential part in human life mankind has profited from the plants that surround it in many ways since its inception, chiefly as a source of food and as a means of resolving health issues[3-5]. Knowledge, acquired via trial and error or by coincidence, has been passed down through the generations, leading to the development of ethnobotanical culture[6] and traditional knowledge about edible plants has been passed down from generation to generation[7]. However, due to today's socioeconomic and ecological developments, the traditional utilization of wild food plants has considerably diminished[8,9]. At the same time, the younger generation's apathy to this issue represents a threat to the long-term viability of conventional knowledge[10]. Staple foods contaminated with toxic compounds (pesticides, artificial fertilizers, food additives, etc.) are among the most significant factors threatening human health. Due to the increasing hunger in the world, it is improbable to entirely eliminate the staple foods consumed in human nutrition. Although edible plants are not an adequate staple food for human nutrition, they can be an alternative healthy food source for societies consuming unhealthy food[11,12,47]. The use of edible wild plants is widespread even in the most developed parts of the world today[13].

Many wild edible plants are rich in nutrients and can complement the nutritional requirements, particularly vitamins and micronutrients[14]. It has been ascertained that wild edible plants in some cases are superior to cultivated plants[15].

Dishes made with wild edible plants are very significant in terms of promoting local cuisines and formulating the gastronomic image of the local cuisine[16].

Anatolia which is located in a region where the impacts of many civilizations can be seen from a

*Corresponding author

historical aspect has a rich traditional culture. Moreover, Turkey has a rich flora by hosting 12,000 plant species and 3,000 of them are endemic[17]. Hence, due to its traditional cultural accumulation and rich plant diversity, it has created a culture of plant use throughout history in Anatolia. One of the places with a rich cultural heritage in Anatolia is Mardin province, located in Turkey's Southeast Anatolia.

Due to its great plant variety, Turkey offers significant potential for exploring novel ethnobotanical applications[18]. However, systematic ethnobotanical studies started in Turkey in the 1990s[19]. Diverse ethnobotanical and edible plant studies have been carried out in Turkey's different areas[20]. However, only a small number of ethnobotanical research have been conducted in Turkey's southeastern area[21]. Only two local areas in Mardin province were studied for wild edible plants[22,23]. This study, on the other hand, was designed to encompass the entire province of Mardin.

Mardin is a region that has hosted various civilizations within the borders of the region called ancient Mesopotamia. Many people and religious communities have lived together in this region since the beginning of history[22]. As one of the cities hosting the greatest diversity in Turkey, Mardin's ethnic structure is composed of Kurds, Turks, Arabs, Assyrians, Armenians and Yazidis. Since it incorporates various beliefs and identities, it has made a positive effect on the food culture and has created an authentic cuisine. Dishes prepared for religious ceremonies of various religions, charity meals traditionally made for weddings, births and condolences are the principal elements of the local cuisine[24]. Consequently, edible wild plants have a significant place in Mardin's local dishes. As a result, documenting knowledge about these wild edible plants, which play a significant role in Mardin's traditional culture, is critical.

Thus, the goal of this study is to identify the edible wild plants utilized as food in Mardin, to scientifically identify these species, to record local people's knowledge of wild edible plants, and to pass this knowledge on to future generations.

Materials and Methods

Study area

Mardin province, the area of the study, is located on the Tigris part of the Southeastern Anatolia Region. It is located between 36°55 - 38°51 North Latitudes and 39°56 - 42°54 East Longitudes and has a surface area of 8,8891 km²; it is a neighbor with Syria (Fig. 1).

The study area is located in the Iran-Turan phytogeographical region as a phytogeographical region. Mardin is like a real open-air museum including cultures of Byzantine, Roman, Seljuk and Ottoman state and with its mosaic of different languages, religions and cultures[25].

Plant material

This study was carried out in the villages and neighborhoods with high ethnobotanical accumulation in the towns of Savur, Mazıdağ, Derik, Kızıltepe, Ömerli, Dargeçit, Nusaybin, Yeşilli and Artuklu. The information (GPS coordinates, localities, etc.) of the plant specimens collected as a result of interviews with participants between 2019-2020 was recorded (Table 1). Flora of Turkey books were used for the identification of plant taxa[17-26]. Plant names were verified using the "The Plant List" (http://www.theplantlist.org/) website[27]. Since taxa are arranged in alphabetical order, they are presented as a mixed list. Therefore, family information is not included. Bitlis Eren University currently lacks an official Herbarium. Therefore, the collector number was utilized instead of the taxon's herbarium number in Table 2. The taxa that have been identified are kept in the University's Biology Department.

The ethnic origins of the participants are mostly Kurdish, Arab and Assyrian. Consequently, local names of plants were written in Arabic (A), Kurdish (K) and Syriac (S) languages.

Interviews with native people

202 participants in total including 38 women and 164 men were identified, and face-to-face interviews

Fig. 1 — Study area

Table 1 — Plant collection stations in the research area

Station No	County/village	Longitude/ Latitude	Altitude	Date	Station No	County/village	Longitude/ Latitude	Altitude (meter)	Date
1	Savur/Serenli	37°33'59.29"N, 40°48'25.40"E	967 m,	08.04.2020	**29**	Ömerli/Kaynakkaya	37°20'31.63"N, 40°55'45.95"E,	1037 m,	12.03.2019
2	Savur/Pınardere	37°29'9.62"N, 40°50'0.48"E,	917 m,	27.04.2020	**30**	Ömerli/Yeni	37°24'59.67"N, 40°57'38.41"E,	1100 m,	05.05.2020
3	Savur/Başkavak	37°34'48.06"N, 40°52'51.70"E,	803 m,	12.05.2020	**31**	Ömerli/Sivritepe	37°22'45.81"N, 40°54'0.23"E,	1118 m,	28.04.2019
4	Savur/Devlet	37°32'07.39"N, 40°53'50.53"E,	867m,	17.09.2019	**32**	Ömerli/Kocasırt	37°20'55.22"N, 40°53'31.80"E,	1126 m,	05.05.2020
5	Savur/Soylu	37°39'08.03"N, 40°49'09.69"E,	803 m,	06.05.2019	**33**	Ömerli/Çınaraltı	37°24'10.95"N, 40°50'42.36"E,	1040 m,	15.05.2020
6	Savur/Durusu	37°32'07.51"N, 40°49'38.18"E,	875 m,	11.05.2020	**34**	Ömerli/Beşikkaya	37°22'17.21"N, 41°05'18.09"E,	881 m,	05.05.2020
7	Savur/Köprülü	37°27'25.95"N, 40°51'41.73"E,	936 m,	30.04.2020	**35**	Ömerli/Fırtıklı	37°23'38.95"N, 40°55'04.15"E,	1116 m,	18.04.2019
8	Savur/Beşevler	37°32'37.63"N, 40°50'47.41"E,	830 m,	12.03.2019	**36**	Dargeçit/Bahçebaşı	37°32'12.11"N, 41°43'20.00"E,	876 m,	21.03.2019
9	Savur/Başağaç	37°37'18.58"N 41°01'05.42"E,	937 m,	09.04.2019	**37**	Dargeçit/Kısmetli	37°30'00.98"N, 41°42'21.89"E,	909 m,	24.10.2019
10	Mazıdağ/Gündoğan	37°28'10.50"N, 40°29'14.66"E,	1064 m,	28.04.2019	**38**	Dargeçit/Suçatı	37°35'17.13"N, 41°45'52.94"E,	979 m,	04.05.2019
11	Mazıdağ/Ömürlü	37°30'47.75"N, 40°30'55.88"E,	923 m,	08.04.2020	**39**	Dargeçit/Klavuz	37°28'52.01"N, 41°47'11.56"E,	857 m,	12.03.2019
12	Mazıdağ/Kocakent	37°30'47.09"N, 40°23'31.66"E,	908 m,	22.03.2019	**40**	Nusaybin/Kalccik	37° 8'58.12"N, 41°14'31.16"E,	606 m,	15.04.2019
13	Mazıdağ/Karaalanı	37°27'56.73"N, 40°30'22.13"E,	1030 m,	28.04.2019	**41**	Nusaybin/Pazar	37°11'11.22"N, 41°39'19.68"E,	611 m,	18.04.2019
14	Mazıdağ/Arıköy	37°26'29.42"N, 40°30'52.80"E,	1080 m,	10.09.2019	**42**	Nusaybin/Kayadibi	37°07'36.19"N, 41°20'56.80"E,	562 m,	12.03.2019
15	Mazıdağ/Kayalar	37°28'32.66"N, 40°28'18.79"E,	1099 m,	11.05.2020	**43**	Nusaybin/Duruca	37°05'17.51"N, 41°18'09.17"E,	464 m,	28.03.2019
16	Derik/Koçyiğit	37°16'39.23"N, 40°13'34.47"E,	548 m,	10.09.2019	**44**	Nusaybin/Yolbilen	37° 5'31.90"N, 41°20'19.89"E,	466 m,	28.04.2019
17	Derik/Kale	37°21'52.98"N, 40°15'48.13"E,	786 m,	21.05.2020	**45**	Yeşilli/Zeytinli	37°13'22.20"N, 40°50'02.52"E,	666 m,	12.03.2019
18	Derik/Dağ	37°22'21.78"N, 40°16'34.07"E,	871 m,	24.10.2019	**46**	Yeşilli/Alıçlı	37°15'14.29"N, 40°55'28.83"E,	802 m,	27.04.2020.
19	Derik/Zeytinpınar	37°23'54.00"N, 40°16'51.75"E,	1150 m,	21.05.2020	**47**	Yeşilli/Dereyanı	37°25'31.39"N, 40°51'52.90"E,	979 m,	09.10.2019
20	Derik/Çiviker	37°19'42.10"N, 39°59'22.94"E,	667 m,	28.04.2020	**48**	Yeşilli/Bülbül	37°19'03.97"N, 40°49'56.32"E,	795 m,	15.05.2020.
21	Derik/Bayır	37°17'16.70"N, 40°01'28.44"E,	587 m,	28.04.2020	**59**	Yeşilli/Sancar	37°18'57.08"N, 40°52'57.70"E,	878 m,	10.04.2020.
22	Derik/Böğrek	37°21'04.20"N, 40°13'14.10"E,	688 m,	05.05.2020	**50**	Artuklu/Toruntepe	37°08'19.85"N, 40°50'22.68"E,	501 m,	21.04.2020.
23	Kızıltepe/Hocalar	37°08'51.24"N, 40°30'27.26"E,	458 m,	12.03.2019	**51**	Artuklu/13 Mart	37°20'03.47"N, 40°43'09.82"E,	897 m,	14.05.2020
24	Kızıltepe/Erdem	37°18'15.02"N, 40°37'25.05"E,	750 m,	04.05.2019	**52**	Artuklu/Yaylacık	37°22'42.96"N, 40°40'58.62"E,	112 m,	14.05.2020.
25	Kızıltepe/Akkoç	37°13'13.74"N, 40°23'47.69"E,	499 m,	21.03.2019	**53**	Artuklu/Alımlı	37°17'03.14"N, 40°48'30.71"E,	763 m,	22.05.2020.
26	Kızıltepe/Demirci	37°09'31.53"N, 40°27'12.80"E,	465 m,	09.04.2019	**54**	Artuklu/Nur	37°22'07.81"N, 40°41'05.59"E,	973 m,	27.04.2020.
27	Kızıltepe/Ziyaret	37°15'09.06"N, 40°37'56.11"E,	526 m,	17.09.2019	**55**	Artuklu/Sultanköy	37°28'15.47"N, 40°36'56.68"E,	967 m,	17.04.2020.
28	Ömerli/Cumhuriyet	37°25'08.52"N, 40°57'43.58"E,	1120 m,	21.03.2019	**56**	Artuklu/Yolbaşı	37°15'34.99"N, 40°48'12.17"E,	644 m,	07.04.2020.

Table 2 — Wild edible food plants in Mardin Province

Plant species, Vouchers numbers, (station number)	Vernacular name in Mardin	Edible parts	Consumption forms	VU
Amaranthaceae				
Amaranthus retroflexus L.,NA051, (17)	Koksor, Silqvaş (K).	Aerial parts	As a vegetable dish with *portulaca oleracea*	0.024
Amaryllidaceae				
Allium ampeloprasum L.,NA011, (28)	Sirdım, Sirik, Sirvask, Sorum (K),Sume, Fumme (A).	Bulb, Shoot, Leaf	Cheese making	0.017
Allium kharputense Freyn & Sint.,NA069, (1)	Soryazk, Sirik, Sirdim (K).	Bulb, Shoot, Leaf	Cheese making or in a rice dish	0.019
Allium noeanum Reut. ex Regel, NA093, (3)	Soryazk, Sirik, Sirdim (K).	Bulb, Shoot, Leaf	İn a rice dish	0.084
Anacardiaceae				
Pistacia terebinthus L.,NA057, (18)	Kızwan, Bıttım (K), Bıttım (A), Bıtmê, Şigoro (S).	Fruit, gum	Raw, gum or coffe making	0.069
Rhus coriaria L.,NA060, (19)	Sımak, Sımmak (K),Sımmak (A),Hamsıfto, Hımsiso (S)	Fruit	Sauce making	0.044
Apiaceae				
Bunium paucifolium DC. NA024, (1)	Guzâ pire, Hibelok, Ğelilok, Penirok (K).	Tuber	Raw	0.034
Coriandrum sativum L., *NA114,* (1)	Gıjnij, Gıjniş (K), Kızbara (A), Kısberfto (S).	Seed	As spice	0.019
Echinophora tenuifolia L., NA056, (5)	Kerkor, Çirdûk (K)	Aerial parts	Cheese making. For molasses flavor	0.019
Eryngium campestre L. var. *virens* (Link) Weins, NA118, (20)	Kerengê nebiyan, Şekırok, ecirok, Encero (K), Ikkeyde (A).	Leaf	Raw	0.024
Eryngium creticum Lam., NA049, (6)	Striye berğan, Ecirok, Encero (K), Ikkeyde (A).	Fresh shoot	Raw	0.054
Scandix iberica M.Bieb., NA003, (43)	Ziçrık, Nançuk (K), Hefraf, Hıfraf (A).	Aerial parts	As raw in salad	0.029
Scandix pecten-veneris L., NA005, (35)	Surık, Hıfraf, Surafk, Erebrefok (K).	Aerial parts	Roast with onion	0.059
Araceae				
Arum rupicola Boiss., NA019, (27)	Kardi, Kardiya gülük, Kardiya nêr (K), Zıbbıl rumi (A).	Leaf	A vegetable dish with meat or as a wrapping material in sarma	0.242
Biarum carduchorum (Schot) Engl., NA002, (45)	Kardiya ereba, Kardi (K).	Leaf	Roast with onion	0.019
Eminium spiculatum (Blume) Schott, NA083, (45)	Kirkê ereba, Zîlika ereba (K).	Leaf	In a rice dish	0.089
Asparagaceae				
Bellevalia longipes Post, NA094, (21)	Akbandır (K).	Bulb, Leaf	Onion or egg-vegetable dish	0.024
Ornithogalum montanum Cirillo., NA082, (50)	Sersipik, Ağbandır (K).	Aerial parts	In a rice dish	0.054
Asteraceae				
Carduus pycnocephalus subsp. *breviphyllarius P.H. Davis, NA040,* (11)	Kelbeşa kera, Kerbeş, (K).	Leaf	A Rice-vegetable dish	0.193
Centaurea iberica Trev. ex Sprengel, NA122, (18)	Strizerk, Stri, Histrizerk (K).	Leaf	Roast with onion	0.301
Centaurea sclerolepis Boiss., NA031, (29)	Hivanok, Ğre ge, Erpelan, Gezerê berî (K).	Root	Raw	0.044
Centaurea solstitialis L., NA001, (24)	Strizerk, Stri, Histrizerk, Zımanê çivikê (K).	Leaf	Roast with onion	0.301
Echinops orientalis Trautv., NA103, (31)	Şekerok, Serteşık, Topık (K).	Fruit	Raw	0.014

(*Contd*.)

Table 2 — Wild edible food plants in Mardin Province (*Contd.*)

Araceae				
Gundelia mesopotamica Fırat, NA110, (51)	Kereng (K), Herşef (A), Erkuvê (S).	Fresh shoot	As an egg-vegetable dish, raw, making pickles or in a rice dish	0.811
Matricaria aurea (Loefl.) Sch. Bip., NA028, (42)	Beybun, Beybunat, Darkê sevâ (K), Beybun (A), İloılto (S).	Flower	As herbal tea	0.059
Notobasis syriaca (L.) Cass., NA111, (7)	Kelbeşê belek, Kelbeş, Kerbeş (K).	Leaf yaprak, fresh shoot	Roast with onion or raw	0.044
Onopordum bracteatum Boiss. & Heldr., NA121, (20)	Kelbeş, Kerbeş (K).	Leaf	Roast with onion	0.019
Onopordum carduchorum Bornm. & Beauverd, NA104, (22)	Kivark, Kifar (K).	Leaf	Roast with onion	0.400
Picris strigosa subsp. *kurdica* Lack, NA033, (34)	Hıspın, Nıkê kaze, Talî (K).	Leaf	Roast with onion	0.019
Scorzoneracana var. *jacquiniana* (W. Koch) D.F.Chamb., NA042, (32)	Gizbelok, Ğilok, Pırçıka pirê, Spıng, Gezerok, Pırpıncık (K), Dehebe, lıbehe (A), Ğıyare cebel (S).	Root, Leaf	As raw in salad	0.148
Silybum marianum (L.) Gaertn., NA014, (25)	Kelbeşa belek, hıreş, Kivar, Kelğ (K).	Leaf, Fresh shoot	Roast with onion	0.396
Sinapis arvensis L., NA017, (44)	Ğerdel, Şelmok (K).	Leaf	As a wrapping material in sarma or roasted with onion	0.346
Sonchus asper (L.) Hill, NA072, (12)	Talli, Kelbeşê nermık (K).	Leaf	Roast with onion	0.014
Taraxacum aleppicum Dahlst., NA045, (19)	Talyê keva, Talî, Gulika zer (K), Henkıf, Mırays (A).	Leaf	Roast with onion	0.014
Tragopogon coloratus C.A.Mey., NA089, (8)	Gizbelok, Ğilok (K).	Leaf	Raw or in a rice dish	0.044
Tragopogon latifolius Boiss., NA097, (8)	Guhbellok, Spıng (K).	Leaf	Raw, in a rice dish or as raw in salad	0.024
Tragopogon porrifolius subsp. longirostris (Sch.Bip.) Greuter, NA091, (10)	Lovık, Darpisik (K).	Leaf	As raw in salad	0.049
Tripleurospermum parviflorum (Willd.) Pobed., NA015, (13)	Gulika kehvan, Beybûn, Kahvan (K).	Flower	As herbal tea	0.029
Boraginaceae				
Alkanna trichophila var. *mardinensis* Hub.-Mor., NA079, (52)	Mıjmıjok (K), Mısays (A).	Flower	Suck nectar of a flower	0.054
Anchusa azurea Mill., NA041, (14)	Guriz, Güriza bellık (K), Hımhım (A), Eynınto, Gurze (S).	Leaf	A vegetable dish with onion	0.306
Asperugo procumbens L., NA008, (18)	Guriza nermık, Gepa mıhe, Goşt berğık (K).	Aerial parts	Roast with onion	0.034
Echium italicum L., NA106, (33)	Güriza top, Gurız (K), Hımhım (A).	Leaf	Roast with onion	0.039
Onosma alborosea subsp. *sanguinolenta* (Vatke) Bornm., NA018, (12)	Mijmijok (K), Mısays (A).	Flower	Suck nectar of a flower	0.049
Calepina irregularis Thell., NA034, (32)	Giyahe haco, Pir ğelack, Giyahe genî (K).	Leaf	Roast with onion or raw in salad	0.029
Capparaceae				
Capparis sicula Duhamel, NA086, (53)	Kember, Berık, Berıkâkembere (K), Şefelleh (A).	Bud	Pickles making	0.019
Capsella bursa-pastoris (L.) Medik., NA007, (43)	Zengıl zava, Pir ğelack, Zımanċ çivika, Harık, Pıncar (K), Mırer (A).	Leaf	Roast with onion	0.089
Conringia planisiliqua Fisch. & C.A.Mey., NA074, (12)	Trîşof, Pıncarê gulilka spi (K).	Leaf	Roast with onion	0.014
Eruca vesicaria (L.) Cav., NA096, (46)	Şelmogi (K).	Leaf	Raw	0.019
Erysimum repandum L., NA099, (41)	Ğerdel, Şelmok (K).	Leaf	A vegetable dish	0.237
Lepidium draba L., NA009, (24)	Kınêber (K), Kınnıbrê (A), Kınevrê (S).	Leaf	In a rice dish, a vegetable dish or raw in salad	0.148
Lepidium sativum L., NA037, (21)	Gejnık, Dejnık, Roşaltık (K).	Aerial parts	Raw in salad	0.074

(*Contd.*)

Table 2 — Wild edible food plants in Mardin Province (*Contd.*)

Boraginaceae				
Nasturtium officinale R.Br., NA004, (9)	Tuzık, Tusmask (K), Kızmasê (A).	Aerial parts	Raw in salad	0.306
Neslia paniculata (L.) Desv., NA073, (12)	Ğerdel (K).	Leaf	Roast with onion	0.014
Cannabaceae				
Celtis australis subsp. *caucasica* (Willd.) C.C.Towns., NA059, (19)	Tâv (K), Dığ dığ, Gıngırês (A), Gernuso (S).	Fruit	Raw	0.277
Convolvulaceae				
Convolvulus arvensis L., NA095, (54)	Lavlavk, Dangirek (K).	Leaf	An egg-vegetable dish	0.014
Caryophyllaceae				
Vaccaria hispanica (Mill.) Rauschert, NA100, (12)	Reşreşık, Nılklê dika (K).	Leaf	Roast with onion	0.014
Cucurbitaceae				
Bryonia multiflora Boiss. & Heldr., NA032, (1)	Rezıkrêvi, Ğerzıkrêvi, Pedark (K), Lebê, Nızeyre, Lığbê (A), Amızğa(S).	Leaf	An Egg-vegetable dish	0.153
Euphorbiaceae				
Euphorbia craspedia Boiss., NA070, (3)	Şirik, Şirêz, Şirmar (K), Lığyê (A), Huşilê (S).	Latex	Dairy products yeast making	0.014
Euphorbia gaillardotii Boiss. & Blanche, NA052, (15)	Ğuşil, Ğaşil, Şirik (K).	Aerial parts	For molasses flavor	0.044
Euphorbia macroclada Boiss., NA098, (3)	Şirik, Şirêz, Şirmar (K), Lığyê, Lığde (A), Huşilê (S).	Latex	Dairy products yeast making	0.014
Fabaceae				
Glycyrrhiza glabra L. NA065, (54)	ava suse, Sus (K).	Root	Sherbet making	0.019
Lathyrus aphaca L., NA012, (23)	Nankê civika, Şokule çukâ (K).	Leaf, Fruit	Raw	0.024
Lathyrus cassius Boiss., NA030, (37)	Baklê bizini, Baklê geva (K), Çeleben hecel (A).	Fruit	Raw	0.019
Lens culinaris Medik., NA080, (55)	Niska bej (K).	Fruit	Raw	0.029
Pisum sativum L., NA023, (27)	Bakıle xatunê, Şol genik, Şokıl (K).	Fruit	Raw	0.044
Prosopis farcta (Banks & Sol.) J.F. Macbr., NA116, (20)	Berık, hashesok, Ğurnuf (K), Ğurnub (A), Harnube (S).	Fruit	Raw	0.014
Vicia ervilia (L.)Willd., NA117, (34)	Kızın, Kıznok, Bakıl (K).	Fruit	Raw	0.019
Vicia narbonensis L., NA010, (26)	Bakılê hıspa, Bakılê ga, Şakıl, Lovıkê hıspa, Şokılê ga (K).	Fruit	Raw	0.029
Vicia sericocarpa Fenzl., NA025, (4)	Bakılê mê, Baklê mara (K).	Fruit	Raw	0.024
Quercus infectoria Oliv., NA062, (38)	Darâ berô, berô (K), Bellot (A), Balutê (S).	Seed	Raw or cook like chestnuts	0.287
Geraniaceae				
Erodium cicutarium (L.) L Hér., NA044, (39)	Derzidank, Derzicank, Derziya pirê (K).	Aerial parts	Roast with onion	0.049
Geranium tuberosum L., NA071, (30)	Güza ereba, Güza bın erd (K).	Tuber	Raw	0.024
Hypericaceae				
Hypericum triquetrifolium Turra, NA050, (43)	Botav, Botaf, Ğurnuf (K), Aran (A).	Aerial parts	As herbal tea or used for molasses flavor	0.049
Iridaceae				
Crocus cancellatus subsp. *damascenus* (Herb.) B. Mathew, NA064, (20)	Pivok, kırkaş, Şınerok (K).	Tuber	Raw	0.252
İris reticulata M. Bieb, NA075, (12)	Bırbızek, Gulilka nevruzê (K), Bırğızzeyl (A).	Aerial parts	Raw	0.029
Lamiaceae				
Mentha longifolia subsp. *typhoide*s (Briq.) Harley, NA027, (3)	Pung (K).	Leaf	As spice	0.059
Mentha spicata L., NA058, (47)	Nane (K), Nınhe (A), Nunıvo (S).	Leaf	As herbal tea or spice	0.054
Rosmarinus officinalis L., NA081, (51)	Bibera hürık, Gilapejm (K).	Leaf	As spice in soup	0.019
Salvia multicaulis Vahl, NA068, (3)	Çaya çiyan, Çaya çolê (K).	Leaf, Flower	As herbal tea	0.014

(*Contd.*)

Table 2 — Wild edible food plants in Mardin Province (*Contd*.)

Stachys menthoides Kotschy & Boiss., NA115, (7)	Hacituğup (K).	Leaf	In a rice dish or an egg-vegetable dish	0.004
Teucrium polium L., NA109, (19)	Bojnak, Giyahabo, Mervên (K), Cadê (A).	Aerial parts	As herbal tea	0.024
Thymbra spicata L., NA120, (48)	Cehter, cehteri (K), Zahter, zehter (A).	Leaf	As herbal tea or spice	0.024
Lauraceae				
Laurus nobilis L., NA067, (56)	Dafni, Gulbebd (K).	Leaf	As spice	0.014
Lyhtraceae				
Punica granatum L., NA129, (19)	Hınar (K), Rımman (A), Remuno (S).	Fruit	Sauce making	0,034
Malvaceae				
Alcea acaulis (Cav.) Alef., NA123, (20)	Dara hiro, Darhiro, Hiro (K), Hitmiye (A), Ntaptso (S).	Flower	As herbal tea	0,034
Alcea hohenackeri Boiss., NA125, (48)	Darhiro, Hiro (K), Ntaptso (S).	Flower	As herbal tea	0.029
Alcea setosa(Boiss) Alef., NA108, (14)	Dara hiro, Hiro (K), Hitmiye (A),	Flower	As herbal tea	0.039
Malva neglecta Wallr., NA043, (45)	Tolık (K), Ğıbbbes, Hıbbes (A), Tolke (S).	Aerial parts	A vegetable dish or in the pastry mix	0.74
Malva sylvestris L., NA101, (33)	Tolık (K), Ğıbbbes, Hıbbes (A), Tolke (S).	Aerial parts	An egg-vegetable dish	0.17
Moraceae				
Ficus carica L., NA054, (20)	Hejir, Hıjira beri, Hejira bej (K), Tın (A), Têno (S).	Fruit, Latex	Raw or in cheese making	0.084
Morus alba L., NA076, (18)	Tü, Tüık (K), Tuıts (A), Tutso (S).	Fruit, Leaf	Molases making or as a wrapping material in sarma	0.049
Papaveraceae				
Hypecoum imberbe Sm., NA092, (50)	Endeko (K).	Leaf	Raw	0.039
Papaver macrostomum Boiss. & A. Huet, NA006, (40)	Buk u zava, Gulika nisanê, Ğeçicok, (K), Ceybuğuten (A), Kırceh, Şuşanê (S).	Aerial parts	Roast with onion	0.158
Papaver rhoeas L. NA105, (35)	Gulika ereba, Pıncare şerin, Buk u zava, Gulika nisanê, Ğeçicok, Nanke kaze, Gulilka şahit (K), Ceybuğuten (A), Kırceh, Şuşanê (S).	Aerial part	Roast with onion	0.019
Pinaceae				
Pinus sylvestris var. hamata Steven, NA084, (51)	Darâ fıstakê çaman (K).	Seed	Raw	0.019
Plantaginaceae				
Plantago lanceolata L., NA090, (3)	Pelhvês (K).	Leaf	Raw	0.004
Plantago major L., NA113, (6)	Pelhêves (K).	Leaf	Raw	0.004
Poaceae				
Hordeum bulbosum L., NA102, (23)	Sivanok, Cehêk (K).	Tuber	Raw	0.014
Polygonaceae				
Rumex acetosella L., NA127, (20)	Tırşo, Tırşok, Tırşokê ga(K).	Leaf	Raw in salad	0.079
Rumex crispus L., NA029, (36)	Turşo, Turşok (K).	Leaf	Raw in salad	0.054
Rumex tuberosus L., NA022, (12)	Sabina kıjalkê, Tırşo (K).	Leaf	As a wrapping material in sarma or raw	0.069
Portulacaceae				
Portulaca oleracea L., NA053, (28)	Pırpar, Perpar (K), Pırpare (A).	Aerial parts	Egg-vegetable dish, raw in salad	0.29
Ranunculaceae				
Ranunculus cornutus DC., NA085, (49)	Parikê mıhê (K).	Aerial parts	Roast with onion	0.014
Ranunculus macrorrhynchus Boiss., NA013, (34)	Nıklê çukê, Erekâ, Çaf çelek, Sofi encık, Herika (K).	Aerial parts	Roast with onion	0.074

(*Contd*.)

Table 2 — Wild edible food plants in Mardin Province (*Contd*.)

Rosaceae				
Amygdalus arabica Oliv., NA078, (52)	Bıhiv, talık (K), Fırk, Şırt (A), Luğzê (S).	Fruit	Raw as a snack	0.069
Amygdalus orientalis Mill., NA048, (25)	Talık, Bıhiv (K), Fırk, Şırt (A), Luğzê (S).	Fruit	Raw	0.069
Cerasus mahaleb (L.) Mill., NA063, (34)	Kenêr (K), Mehleb (A).	Fruit, Seed, Fresh shoot	Raw or as spice or herbal tea	0.029
Cerasus microcarpa Boiss, NA046, (40)	Hılâlk, belalûk (K), Tığ, Sıkıt (A).	Fruit	Raw	0.099
Crataegus azarolus L., NA047, (4)	Guhij (K), Hızran (A), Azrulê (S).	Fruit	Raw or pickles making	0.19
Pyrus elaeagnifolia subsp. bulgarica (Kuth. & Sachokia) Vulev, NA066, (20)	Bîşkoke, Hîşkoke (K)	Fruit	Raw	0.024
Rosa canina L., NA061, (3)	Gulşilav, Dara gulê, Mevijokê revi (K), Menderis, Verdenıf (A).	Fruit	As herbal tea	0.034
Rosa hemisphaerica Herrm., NA126, (3)	Gulşilav, Dara gulê, (K), Menderis, Verdenıf (A).	Fruit	Raw	0.09
Rubus idaeus L., NA055, (20)	Trireşk, Trikê ereba, Tureşk, Dreh (K), Elleyk (A).	Fruit	Raw	0.034
Tiliaceae				
Tilia cordata Mill., NA119, (52)	Eğlamur, Ehlemur (K).	Leaf, Flower	As herbal tea	0.014
Urticaceae				
Urtica dioica L., NA112, (7)	Gezgezk, Gazgazok (K), Heyyê, Gırêz (A).	Aerial parts	Roast with onion	0.330
Urtica haussknechtii Boiss, NA128, (20)	Gezgezk, Gazgazok (K), Heyyê, Gırêz (A).	Aerial parts	Roast with onion	0.019
Urtica pilulifera L., NA026, (41)	Gezgezk, Gazgazok (K), Heyyê, Gırêz (A).	Aerial parts	Roast with onion	0.034

Abbreviations Used: NA= Nevzat AYAZ,K= Kurdish, A= Arabic S= Syriac

were conducted with these people. The following questions were asked to these participants and their answers were recorded.

- What is the local name of the plant used?
- What parts of the plant do you use?
- How do you prepare the plant for use?

Furthermore, information about the participants (name, surname, gender, age, education, job, etc.) was reported.

The majority of local people in Mardin speak Kurdish. Hence, the interviews were usually conducted in Kurdish. The interview was conducted in Turkish with those who do not speak Kurdish, or the language they spoke (Arabic, Syriac) was translated, and the information provided was noted. The participants were chosen based on the recommendations of local elders in the communities where the survey was performed. Folks with extensive ethnobotanical knowledge make up this group.

The interviews were done in conformity with the International Society of Ethnobiology's Code of Ethics. The participants were verbally briefed about the task that needed to be done and they gave their verbal consent.

Use value (UV)

Among the quantitative techniques preferred in ethnobotanical studies, the use-value (UV) index introduced by Phillips and Gentry is extensively used to measure the relative importance of the species[28].

It is calculated by using the following formula: UV = ΣUi / n.

Ui: the number of uses mentioned by each informant for a particular species,

n: is equal to the total number of participants[29]. UV of each detected taxon was calculated.

Informant consensus factor (ICF)

The informant consensus factor (ICF) was evaluated quantitatively to determine the homogeneity of plant species utilization among traditional informants[30].

The ICF was determined using the following formula:

ICF = Nur-Nt/Nur-1

Nur denotes the total number of usage reports for each edible plant category (as raw, cooked etc.)

Nt denotes the total number of plant species utilized in that category.

The ICF value is a number that varies from 0 to 1.

Results and Discussion

As a result of the studies carried out at the stations shown in Table 1. 117 taxa belonging to 34 families and 92 genera, which are used as traditional food, were discovered. Identified taxa, vouchers numbers, station numbers, vernacular names, edible parts, consumption forms and use values are presented in Table 2.

The richest families in terms of the number of taxa in Flora of Turkey are Asteraceae, Fabaceae, Lamiaceae and Brassicaceae[26]. In addition, the members of these families have played a significant role in terms of being used as food by the Anatolian people due to their richness in protein, oil, flavor and minerals[31,32]. The first 10 families containing the most taxa among the plants determined to be used in the study area are presented in Fig. 2.

In terms of the ethnobotanical usage of these taxa; most of them (70%) are consumed raw or cooked as vegetables. On the other hand, they are used for coffee, tea, brines, spices and dairy Products. If we consider the part of the products used, mostly the leaves are used (36.23%). This ratio is due to the use of leaves in raw consumption or consumption as a vegetable. Fruits come in second place with a rate of 18.11%. Fruits are principally used as snacks and for making the beverages.

Some ethnobotanical studies have been carried out in local areas in Mardin. According to the ethnobotanical study conducted in Midyat district, it was found that only 22% of 92 taxa were used as food[23]. Other than this, 74 wild edible taxa were recorded in the study conducted for the identification of the edible wild plants in Yeşilli district[22]. Furthermore, in the study conducted to ascertain medicinal plants used by the public in Artuklu district, 85 taxa with medicinal use were determined[33]. Our research was conducted throughout Mardin except for Midyat district. Since the information obtained from several interviews conducted in the district of Midyat is similar to Akgül (2018)[23], conducting a study in this region was abandoned. Although a study has been conducted in Yeşilli district, the results obtained are different[22].

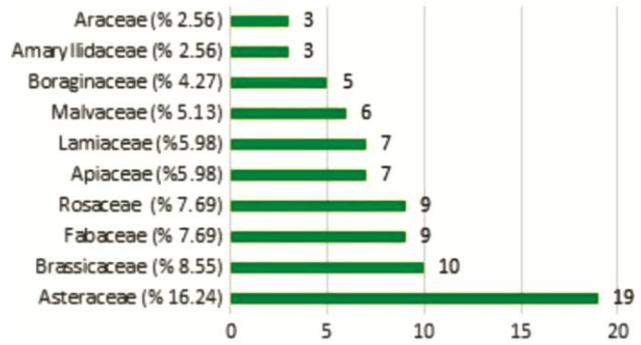

Fig. 2 — The percentages of the most used plant families

When compared with the studies mentioned above, the following taxa were recorded for the first time in this study: *Alcea acaulis* (Cav.) Alef., *A. setosa* (Boiss.) Alef., *A. hohenackeri* Boiss., *Asperugo procumbens* L., *Calepina irregularis* (Asso) Thell., *Centaurea sclerolepis* Boiss, *Conringia planisiliqua* Fisch. & C.A. Mey., *Euphorbia gaillardotii* Boiss. & Blanche, *Hypecoum imberbe* Sm., *Erysimum repandum* L., *Laurus nobilis* L., *Onopordum bracteatum* Boiss. & Heldr., *Ornithogalum montanum* Cirillo, *Ranunculus cornutus* DC., *Ranunculus macrorrhynchus* Boiss, *Rosa hemisphaerica* Herrm., *Rumex acetosella* L., *Picris strigosa* M. Bieb. *Sub* sp. *kurdica, Pinus sylvestris var. hamata* Steven, *Sonchus asper* (L.) Hill, *Pyrus elaeagnifolia* Pall. *Scandix iberica* M. Bieb., *Tragopogon coloratus* C.A. Mey., *Tripleurospermum parviflorum* (Willd.) Pobed., *Tilia cordata* Mill., *Urtica haussknechtii* Boiss.

C. sclerolepis Boiss., *G. mesopotamica* Fırat, *Alkanna trichophila* var. *mardinensis* Hub.-Mor. and *Stachys menthoides* Kotschy & Boiss are endemic plants for Turkey which used for food purposes in Mardin. According to the Red Data Book of Turkish Plants and Red List Categories, *A. trichophila* var. *mardinensis* Hub.-Mor. and *S. menthoides* Kotschy & Boiss "least concern", *C. sclerolepis* Boiss and *G. mesopotamica* Fırat are categorized as "vulnerable"[34]. The use of *C. sclerolepis* Boiss and *S. menthoides* Kotschy & Boiss taxa as food is recorded for the first time. The root of *C. sclerolepis* Boiss is consumed raw, particularly in Ömerli district, while *S. menthoides* Kotschy & Boiss is only used in Savur district. The leaves and fresh shoots of the plant are added to the rice dish or used in salads. The use of *G. mesopotamica* Fırat use as food is very diverse. It could be used in various forms as a vegetable as well as being preferred in pickling. *A. trichophila* var. *mardinensis* Hub-Mor. has a dense population and its use is not very intensive.

Since many languages are spoken in Mardin, these languages are reflected in the local names of taxa. 317 local names in Arabic, Kurdish and Syriac languages were detected in our study. *Papaver macrostomum* Boiss. & A. Huet, *Scorzonera cana* (C.A. Mey.) Grossh. and *Capsella bursa-pastoris* (L.) Medik. are the taxa with the most different local names.

The plants that were identified were divided into the following categories based on their usage patterns.

Consumption of plants as raw (salad etc.)

53 taxa have been recorded in this category. People living in rural areas consume fresh leaves, shoots and flowers of plants such *İris reticulata* M. Bieb. *Tragopogon latifolius* Popov, *C. bursa-pastoris* (L.) Medik., *Lepidium sativum* L., *Rumex acetosella* L. and the fruit seeds of plants such as *Lathyrus aphaca* L., *Prosopis farcta* (Banks & Sol.) J.F. Macbr, *Vicia sericocarpa* Fenzl, *P. sylvestris* var. *hamata* Steven, *Prunus arabica* (Olivier) Meikle and the roots of the plants such as *Crocus cancellatus* subsp. *damascenes* (Herb.) B. Mathew, *Hordeum bulbosum* L. consume these plants raw as snacks. Leaves and fresh shoots are generally eaten with salt. These traditional uses are essentially discovered in mountain villages. Using the taxa for the salad is common. The fresh parts of the plants such as *Nasturtium officinale* R.Br., *Portulaca oleracea* L., *Mentha longifolia* subsp. *typhoides* (Briq.) Harley, collected from natural areas, are chopped and used in the salads. Also, flowers of some plants containing sweet nectar such as *A. trichophila* var. *mardinensis* Hub.-Mor., *Onosma alborosea* subsp. *sanguinolenta* (Vatke) Bornm. are consumed by children by sucking the sweet nectar.

Consumption as cooked plant

52 taxa were identified in this category. The use of plants in this category is generally very much as they are widespread. It can be said that they can grow in almost every area (roadside, in the field etc.). As in most parts of Anatolia, people living in the countryside of Mardin, particularly in the spring, collect the fresh leaves and shoots of various wild plants and use them either fresh or dried for cooking in the winter. Plants in this category are evaluated in various ways. Among these evaluations, it is evaluated that it is mostly cooked by roasting or frying in oil. Plants collected for this purpose or bought in the market are cut and boiled and then roasted with another additional material (egg, onion). For this purpose, plants such as *G. mesopotamica* Fırat, *N. syriaca* (L.) Cass., *O. carduchorum* Bornm. & Beauverd, *Anchusa azurea* Mill., *C. irregularis* (Asso) Thell., *M. neglecta* Wallr., *U. dioica* L. are used extensively. And also some taxa such as *S. menthoides* Kotschy & Boiss, *Lepidium draba* L., evaluated in this category, are added to the rice dish as an additional ingredient. Some plants such as *M. neglecta* Wallr. are used in the pastry mix. In addition, broad-leaved wild plants such as *Sinapis arvensis* L., *Arum rupicola* Boiss. evaluated in this category are used in "Sarma" making (Fig. 3).

Fig. 3 — Dishes prepared from wild edible plants. (a) Vegetable dish from aerial parts of Silybum marianum (b) Pilav dish from leaves of Lepidium draba (c) Pastry making with leaves of Malva neglecta (d) Sarma making from leaves of Arum rupicola

Plants used as dairy products and yeast

Plants were used to ferment products such as cheese and yoghurt in Anatolia. In addition to the plants such as wheat and chickpeas, these wild plants are used for this purpose. These traditional uses are not popular today. However, particularly in the highlands, animal husbandry can use alternative methods when it is not possible to access artificial yeast. In most cases, the milk used in cheese making is not cooked. Most likely, these plants are employed as antibacterial and aromatic plants[35]. For this purpose, latex containing plants such as *Euphorbia craspedia* Boiss., *Euphorbia macroclada* Boiss., *Ficus carica* L. are used. At the same time, natural plants are used in the production of cheese called "otlu peynir", which is widely used in Eastern Anatolia and Southeastern Anatolia[36]. The "herby cheese" is made without boiling milk. Probably, the plants are also used for flavor or the antimicrobial effect they contain. For this purpose, allium species (*A. ampeloprasum* L., *A. kharputense* Freyn & Sint.) are preferred in Mardin.

Beverages

The ripe fruits of the *Pistacia terebinthus* L. or *P. khinjuk* Stocks, naturally present in the mountains of Southeastern and Eastern Anatolia are used for making coffee. These fruits are locally called "bıttım or kızvan". The product obtained is not similar to the coffee in the classic sense. A paste-like product is obtained as a result of roasting and frying oily fruits. This traditional coffee making is quite common[37,38]. In addition, shoots and leaves of many plants (*Teucrium polium* L., *Thymbra spicata* L. etc.), flowers (*Alcea acaulis* (Cav.) Alef.), or fruit (*Rosa* spp., *cerasus* spp.) parts are brewed and tea is prepared. These teas are drunk for pleasure and in some cases for medical use. Locally, "ava süse" drink is prepared by the roots of *Glycyrrhiza glabra* L.[39]. One of the traditional beverages "ava suse" is not generally used today.

Consumption as seasonings

Some spices traditionally employed in the region are obtained from wild plants. The leaves, fruits, etc. of the plants used for this purpose are grinded and used to add flavor to traditional dishes. For this purpose, the plants such as *Mentha spicata* L., *Thymbra spicata* L., *Laurus nobilis* L. are dried and ground or used fresh.

Pickle

Edible plants are used in pickles as well as many cultivated plants in various parts of the world[40,41]. For this purpose, the fresh shoots of the plant called *G. mesopotamica* Fırat and the fruits of the *Capparis sicula* Duhamel plant are used for pickling in Mardin (Fig. 4).

Sauce

There are traditional sauces used significantly to add flavor to salads. Sour fruits such as *Punica granatum* L., *Rhus coriaria* L. are used in sauce making with traditional methods. Other research works in the area have also mentioned these applications[23,42].

Molasses Flavor

Grape cultivation is performed intensively in the Southeastern Anatolia region. One of the uses of grapes is the making of molasses. Some herbs are used to add flavor and color or thicken to molasses made in the Southeastern Anatolia Region[21,22]. Plants such as Hypericum *triquetrifolium* Turra, *Echinophora tenuifolia* L., detected in Mardin, are the plants used in making molasses (Fig. 5).

Characteristics of participants

The majority (89.6%) of the participants (202 people) are people of Kurdish origin. While the

Fig. 4 — (a) Pickle made with fruits of *Capparis sicula* Vill. (b) Pickle made with aerial parts of *Gundelia mesopotamica*

Fig. 5 — The use of *Hypericum triquetrifolium* Turra from molasses making

proportion of Arabs is approximately 6.9%, the proportion of Syriac participants is nearly 3.5%. Most of the participants interviewed in the study area (64.8%) are primary school graduate or illiterate. 10% of the participants graduated from university. 65% of the participants are between 30-60 years old. The proportion of people over 60 years old is 26% and the proportion of young population is around 9%. The majority of participants are men (81%). The proportion of women interviewed constitutes 19% of all participants (Table 3).

The results reveal that traditional knowledge is not regarded seriously by young people and this cultural heritage is in danger of being forgotten. Hence, it is very crucial to protect this traditional knowledge before it is forgotten. Again, the deficiency of female participants is related to the social situation of the Southeast and East Anatolia regions. This is indicated also in other ethnobotanical studies in Turkey[43,44].

Data analysis

Use value (UV)

Members of the Asteraceae family are commonly the ones with the highest UV. *G. mesopotamica* Fırat (UV: 0,81), *Notobasis syriaca* L. (0,44), *Silybum marianum* Gaertn., *Onopordum carduchorum* Bornm. & Beauverd (0,40) and *Centaurea* species (C. *solstitialis* L., *C. iberica* Trevir. ex Spreng.) (0,30). Apart from these, the type used the most is *Malva neglecta* Wallr. (0.74). Also *Rumex crispus* L. (0.54), *Sinapis Arvensis* L. (0.34), *Urtica dioica* L. (0.33), *Anchusa azurea* Mill., *Portulaca oleracea* L., (0,30) are the species used the most.

Informant consensus factor (ICF)

Table 4 shows the results of the data analysis, which revealed that ICF ranges from 0.83 to 0.97 based on use reports against each usage category. Pickle had the highest ICF value (0,97), followed by cooked (0.94) and sauce (0.93). For seasonings and beverages, the lowest ICF value was recorded (0.83). The high ICF values of the plant categories selected (roughly one) show that the participants agreed on which edible plants to employ. Participants completely agreed on some plants. The majority of the participants gave the same information about plants such as *Gundelia mesopotamica* Fırat, *Malva neclecta* Wallr., *Urtica dioica* L., *Notobasis syriaca* (L.) Cass., *Silybum marianum* L. and *Sinapis*

Table 3 — Classification of participants according to their demographic features

Total people	status	Number of people	Percent (%)
Gender	Man	164	%81
	Women	38	%19
Age groups	18-30	18	8,9
	30-60	131	64,8
	Over 60	53	26,23
Literacy level	Illiterate or Primary	131	64.8
	Others (Middle, High)	50	24.7
	University	21	10.5
Ethnicity	Kurdish	181	89,6
	Arabic	14	6.9
	Syrian	7	3.5

Table 4 — Informant Consensus Factor (ICF) by usage categories within the study area

Usage categories	Total number of species (Nt)	Number of use report (Nur)	ICF
The consuming plants as raw (salad etc.)	53	654	0,92
The cooked plant consumption	52	892	0,94
Those used as dairy products yeast	6	36	0,85
Beverages	12	68	0,83
The consumption as seasonings	6	32	0,83
Pickle	2	43	0,97
Sauce	2	16	0,93
For Molasses Flavor	3	28	0,92

arvensis L. *M. neclecta* Wallr. and *U. dioica* L. in particular, are widely used for both medicinal and culinary purposes in Anatolia[45,46]

Conclusion

This study was performed in 142 neighborhoods with high ethnobotanical potential in the province of Mardin. As a result of the interviews conducted with 202 participants, most of whom live in the countryside and generally work in agriculture and animal husbandry, the tradition of using local herbs as food is still present in Mardin and the culture of using edible plants for this purpose is widespread. Nevertheless, it has been remarked that the new generation is not interested in the use of wild plants. Consequently, it is precious to record these cultural accumulations, which have developed as a result of thousands of years of experience. This study will make an essential contribution to the preservation and transmission of the cultural heritage associated with traditional wild edible plants in this region to future generations.

Conflict of Interest

Authors declare that there is no conflict of interest.

Authors' Contributions

NA: Plant collection and interwiev; ID: Plant identification and writing-original draft and writing-reviewing draft.

References

1 Abbasi A M, Khan M A, Khan N & Shah M H, Ethnobotanical survey of medicinally important wild edible fruits species used by tribal communities of Lesser Himalayas-Pakistan, *J Ethnopharmacol*, 148 (2013) 528-536.

2 Singh K D & Mathew B, Ethnobotanical study on wild edible fruits, spices and aquatic plants traditionally used by the Garo tribe of Meghalaya, *Indian J Tradit Know*, 20 (1) (2021) 117-121.

3 Görhan K Ö & Öztürk F, Ethnopharmacological survey of medicinal and foods plants in Derecik (Hakkari-Turkey), *Indian J Tradit Know*, 20 (2) (2021) 416-425.

4 Singh B, Rai K, Bhatt K C, Chaudhury R, Dubey S K, *et al*., Ethnobotanical notes on some potential wild edible fruits used by the Bhotia community of Niti Valley, Uttarakhand, *Indian J Tradit Know*, 21 (1) (2022) 135-144.

5 Singh K D & Mathew B, Ethnobotanical study on wild edible fruits, spices and aquatic plants traditionally used by the Garo tribe of Meghalaya, *Indian J Tradit Know*, 20 (1) (2021) 117-121.

6 Baytop T, Therapy with medicinal plants in Turkey (Past and Present), (Nobel Medicine Publication, Istanbul), 1999.

7 Kaval I, Behcet L & Cakilcioglu U, Ethnobotanical study on medicinal plants in Gecitli and its surrounding (Hakkari-Turkey), *J Ethnopharmacol*, 155 (2014) 171-84

8 Bonet M À & Vallès J, Use of non-crop food vascular plants in Montseny biosphere reserve (Catalonia, Iberian Peninsula), *Int J Food Sci Nutr*, 53 (3) (2002) 225-48, https://doi.org/10.1080/09637480220132841.

9 Pieroni A, Nebel S, Santoro R F & Heinrich M, Food for two seasons: culinary uses of non- cultivated local vegetables and mushrooms in a south Italian village, *Int J Food Sci Nutr*, 56 (4) (2005) 245-72, https://doi.org/10.1080/09637480500146564.

10 Polat R, Güner, B, Babacan E & Çakılcıoğlu U, Survey of wild food plants for human consumption in Bingöl (Turkey), *Indian J Tradit Know*, 16 (3) (2017) 378-384.

11 Becker B, The contribution of wild plants to human nutrition in the Ferio (Northern Senegal), *Agroforestry Systems*, 1 (3) (1983) 257-267.

12 Agrahar-Murugkar A & Subbulakshmi G, Nutritive values of wild edible fruits, berries, nuts, roots and species consumed by the Khasi tribes of India, *Ecol Food Nutrp*, 44 (3) (2005) 207-223.

13 Jman Redzic S, Wild edible plants and their traditional use in the human nutrition in Bosnia Herzegovina, *Ecol Food Nutr*, 45 (3) (2006) 189-232.

14 Ogle B M & Grivetti L E, Legacy of the chameleon edible wild plants in the Kingdom of Swaziland, South Africa. A cultural, ecological, nutritional study. Parts II-IV, species availability and dietary use, analysis by ecological zone, *Ecol Food Nutr*, 17 (1985) 1-30.

15 Balemie K & Kebebew F, The contribution of wild plants to human nutrition in the Ferio, *South Ethiopia, J Ethnobiol Ethnomed*, 2 (1) (2006) 53.

16 Çetinkaya N & Yıldız S, Erzurum'un yenilebilir otları ve yemeklerde kullanım şekillerine yönelik bir araştırma, *Güncel Turizm Araştırmaları Dergisi*, 2 (1) (2018) 482-503.

17 Güner A, Aslan S, Ekim T, Vural M & Babaç M T, Türkiye bitkileri listesi:(damarlı bitkiler), (Nezahat Gökyiğit Botanik Bahçesi Yayınları, İstanbul), 2012, p. 1-1290.

18 Dogan Y, Nedelcheva A, Luczaj L, Dragulescu C, Stefkov G, *et al*., Of the importance of a leaf: the ethnobotany of sarma in Turkey and the Balkans, *J Ethnobiol Ethnomed*, 11 (1) 201511-26.

19 Ertuğ F, Etnobotanik, In: Güner A, editor. Resimli Türkiye Florası, Vol 1,(İstanbul: Türkiye İş Bankası Kültür Yayınları) 2014.

20 Akalın E & Alpınar K, Tekirdağ'ın tıbbi ve yenen bitkileri hakkında bir araştırma, *J Pharm Ege Univ*, 2 (1994) 1-11.

21 Akan H, Korkut M M & Balos M M, An ethnobotanical study around Arat Mountain and its surroundings (Birecik Sanlıurfa), *Sci Eng J Fırat Univ*, 20 (1) (2008) 67-81.

22 Yeşil Y, Çelik M & Yılmaz B, Wild edible plants in Yeşilli (Mardin-Turkey), a multicultural area, *J Ethnobiol Ethnomed*, 15 (1) (2019) 52.

23 Akgül A, Şenol S G, Yildirim H, Seçmen O & Doğan Y, An ethnobotanical study in Midyat (Turkey), a city on the silk road where cultures meet, *J Ethnobiol Ethnomed*, 14 (1) (2018).

24 Günal V, Mardin ilinde kültürel turizm potansiyeli, *Marmara Coğrafya Dergisi*, (11) (2005) 93-124.

25 Mardin provincial directorate of culture and tourism. https://mardin.gov.tr/TR-56499/yore-mutfagi-gastronomi.html. Accessed 05 August 2020.

26 Davis P H, Flora of Turkey and the East Aegean Islands, Vol.1-9, (Edinburgh Univ. Press, Edinburgh), 1965-1985.

27 The Plant List, A working list of all plant species. http://www.theplantlist.org. Accessed 20 October 2019.

28 Phillips O L & Gentry A H, The useful plants of Tambopata, Peru: I, Statistical hypothesis tests with a new quantitative technique, *Econ Bot*, 47 (1993) 15-32.

29 Albuquerque U P, Lucena R F, Monteiro J M, Florentino A T & Cecília de Fátima C B R, Evaluating two quantitative ethnobotanical techniques, *Ethnobot Res Appl*, 4 (2006) 51-60.

30 Heinrich M, Edwards S, Moerman D E & Leonti M, Ethnopharmacological field studies: a critical assessment of their conceptual basis and methods, *J Ethnopharmacol*, 124 (1) (2009) 1-17

31 Özcan M, Mineral contents of some plants used as condiments in Turkey, *Food Chem*, 84 (3) (2004) 437-440.

32 Samancioğlu A, Sat I G, Yildirim E, Ercisli S, Jurikova T, *et al*., Total phenolic and vitamin C content and antiradical activity evaluation of traditionally consumed wild edible vegetables from Turkey, *Indian J Tradit Know*, 15 (2) (2016) 208-213, http://hdl.handle.net/123456789/33990.

33 Kılıç M, Yıldız K & Kılıç F M, Traditional uses of medicinal plants in Artuklu, Turkey, *Human Ecol*, 1-14 (2020) 619-632.

34 Fırat M, Gundelia mesopotamica (Asteraceae), a new lactiferous species from Mardin (Turkey), *Acta Biol Turcica*, 30 (3) (2017) 64-69.

35 Demir I, A study on wild edible plants for human consumption in Hizan county of Bitlis, Turkey, *Bangladesh J Plant Taxon*, 27 (2) (2020) 377-389.

36 Özçelik H, On the herbal cheese from East Anatolia (Turkey), *Econ Bot*, 48 (2) (1994) 214-217.

37 Kaval İ, Behçet L & Çakilcioğlu U, Survey of wild food plants for human consumption in Geçitli (Hakkari, Turkey), *Indian J Tradit Know*, 14 (2) (2015) 183-190.

38 Yeşil Y & İnal İ, Traditional knowledge of wild edible plants in Hasankeyf (Batman Province, Turkey), *Acta Soc Bot Pol*, 88 (3) (2019) 3633.DOI: 10.5586/asbp.3633

39 Balos M M & Akan H, Zeytinbahçe-Akarçay (Birecik, Şanlıurfa) arasında kalan bölgenin etnobotanik özellikleri, *Selçuk Üniversitesi Fen Fakültesi Fen Dergisi*, 2 (29) (2007) 155-171.

40 Mahmood A, Qureshi R A, Mahmood A, Sangi Y, Shaheen H, *et al*., Ethnobotanical survey of common medicinal plants used by people of district Mirpur, AJK, Pakistan, *J Med Plant Res*, 5 (18) (2011) 4493-4498.

41 Samant S S & Dhar U, Diversity, endemism and economic potential of wild edible plants of Indian Himalaya, *The Int J Sustain Dev World Ecol*, 4 (3) (1997) 179-191.

42 Kaya Ö F, Dağlı M & Çelik H T, An ethnobotanical research in Şanlıurfa central district and attached Villages (Turkey), *Indian J Tradit Know*, 19 (1) (2019) 7-23.

43 Dalar A, Mükemre M, Ünal M & Özgökçe F, Traditional medicinal plants of Ağrı Province, Turkey, *J Ethnopharmacol*, 226 (2018) 56-72.

44 Çakır E A, Traditional knowledge of wild edible plants of Iğdır Province (East Anatolia, Turkey), *Acta Soc Bot Pol*, 86 (4) (2017), DOI: 10.5586/asbp.3568

45 Polat R, Çakılcıoğlu U, Ertuğ, F & Satıl F, An evaluation of ethnobotanical studies in Eastern Anatolia, *Biol Divers Conserv*, 5 (2) (2012) 23-40.

46 Mükemre M, Behçet L & Çakılcıoğlu U, Survey of wild food plants for human consumption in villages of Çatak (Van-Turkey), *Indian J Tradit Know*, 15 (2) (2016) 183-191.

47 Addis G, Urga K & Dikasso D, Ethnobotanical study of edible wild plants in some selected districts of Ethiopia, *Human Ecology*, 33 (1) (2005) 83-118.