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Ethnofoodbotany in the Zagros Mountains: Wild Food Resources and Indigenous Food Heritage in Dehloran, Iran

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ABSTRACT

Background and Objective: Wild edible plants (WEPs) play a vital role in local food systems, contributing to dietary diversity and the intergenerational transmission of indigenous knowledge, yet this traditional knowledge is increasingly at risk of erosion. This study documented and analyzed local ethnobotanical knowledge of WEPs in Dehloran County, Ilam Province, western Iran.

Methods: Ethnofoodbotanical data were collected in April–May 2026 through semi-structured interviews with 30 knowledgeable community members selected via purposive and snowball sampling. Data included local and scientific names, botanical families, edible parts, habitats, harvesting periods, and preparation/consumption methods. Frequency of citation (FC), FC%, and use value (UV) were calculated to assess the relative prominence of documented taxa within the local food-use repertoire.

Results: The documented wild edible taxa represented a diverse range of traditional food uses, including edible vegetables, wild fruits, edible seeds and nuts, traditional beverages, aromatic plants, spices, and processed food products. *Thymus* spp. showed the highest citation frequency (FC = 23; FC% = 76.67%) and use value (UV = 0.77), followed by *Mentha* spp. and *Ziziphus spina-christi* (FC% = 73.33%; UV = 0.73 each) and *Pistacia atlantica* (FC% = 70.00%; UV = 0.70). Traditional processing practices included the preparation of oak acorns through debittering and grinding for food products. The findings also documented diverse practices related to the harvesting, preparation, preservation, and consumption of wild plant resources.

Conclusions: The findings indicate that wild edible plants continue to represent an important component of the food-related knowledge and cultural practices of local communities in Dehloran, with certain species being particularly important in terms of their reported use and cultural relevance. Systematic documentation of this knowledge can contribute to safeguarding intangible cultural heritage, identifying and evaluating indigenous food resources, promoting the sustainable use of plant diversity, and establishing a foundation for future nutritional, phytochemical, and food-product development research.

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Introduction

Wild edible plants (WEPs) have long been an integral component of human interaction with the natural environment and have served as valuable food resources for local communities across diverse regions of the world (Pinela et al., 2017). Beyond their direct contribution to food supplies, these plants have shaped dietary patterns, food traditions, household livelihoods, local economies, and cultural identity. In many rural and pastoral communities, knowledge concerning the identification, harvesting, processing, preparation, and preservation of wild edible plants has traditionally been transmitted orally across generations, constituting an important component of indigenous knowledge and intangible cultural heritage (Pinela et al., 2017). However, rapid social and economic changes, agricultural expansion, urbanisation, changing lifestyles, declining dependence on natural resources, and the weakening of younger generations' connections with their natural surroundings have increasingly placed this knowledge at risk of erosion and loss (Duguma, 2020).

Ethnofoodbotany represents an important area of ethnobotanical research concerned with the knowledge, beliefs, traditions, and practices through which human communities use plants to meet their food-related needs (Merouane et al., 2025). Its scope extends beyond the identification of edible species to encompass plant selection and harvesting, the plant parts consumed, seasonal availability, preparation and processing techniques, modes of consumption and preservation, culinary and condiment uses, cultural and economic significance, and the transmission of knowledge across generations (Merouane et al., 2025). From this perspective, documenting wild edible plants can contribute not only to the preservation of traditional knowledge and cultural heritage but also to a better understanding of plant diversity, food security, dietary diversity, and the potential of indigenous plant resources for the development of novel food products (Jacob & Albuquerque, 2021).

Ilam Province, characterised by substantial climatic, topographic, and floristic diversity, is among the biologically diverse regions of Iran and supports a rich body of traditional knowledge

associated with the utilisation of natural resources (Ghasemi Pirbalouti et al., 2013). Dehloran County, in particular, encompasses diverse geographical and ecological settings and is inhabited by local communities with a long history of harvesting and utilising naturally occurring plant resources. Over generations, these communities have accumulated extensive knowledge concerning wild plants and their multiple uses, including their use as food resources. Despite this considerable ethnobotanical potential, research conducted in the region has predominantly focused on medicinal plants and their therapeutic applications. Consequently, systematic information on the diversity of wild edible plants, their preparation and consumption practices, and the cultural knowledge associated with their use remains limited.

A systematic assessment of local knowledge concerning wild edible plants may reveal species of considerable nutritional, economic, or cultural importance that have received limited scientific attention (Cotton, 1996). Moreover, examining patterns of plant knowledge and use across demographic groups, including different age groups, genders, and occupational categories, can provide insights into the continuity and intergenerational transmission of traditional knowledge and help identify factors contributing to its persistence or decline. Such evidence is particularly relevant to the development of strategies for conserving plant diversity, promoting the sustainable utilisation of wild plant resources, and safeguarding the cultural heritage of local communities (Cotton, 1996).

Although ethnobotanical research in Ilam Province has mainly focused on medicinal plants, studies on wild edible plants and their cultural, nutritional, and traditional aspects remain limited. Therefore, this study aimed to document and analyse the ethnophytobotanical knowledge of wild edible plants used by local communities in Dehloran County, Ilam Province, Iran. The study recorded plant diversity, edible parts, harvesting seasons, preparation methods, consumption patterns, and evaluated the cultural importance of species using quantitative ethnobotanical indices. The findings provide valuable documentation of indigenous food knowledge and support the conservation, sustainable use, and future nutritional and

phytochemical investigation of wild edible plant resources.

Methods

Study Area

Dehloran County is located in the southwestern part of Ilam Province, within the western Zagros region of Iran (Figure 1). The region is characterized by diverse ecological habitats, including mountainous areas, natural rangelands, and semi-arid ecosystems, which provide favorable environmental conditions for the growth, distribution, and persistence of wild edible plant species. The present ethnobotanical study was conducted during April and May 2026 in selected villages and surrounding natural habitats of Dehloran County. Field surveys were carried out to document the geographical characteristics, habitat types, and locations of wild edible plant collection sites. Relevant environmental and ecological information associated with each sampling location was recorded during field investigations. The high floristic diversity of the region, together with the long-standing reliance of local communities on natural plant resources for food and traditional practices, makes Dehloran County a suitable area for investigating indigenous knowledge related to the utilization of wild edible plants.

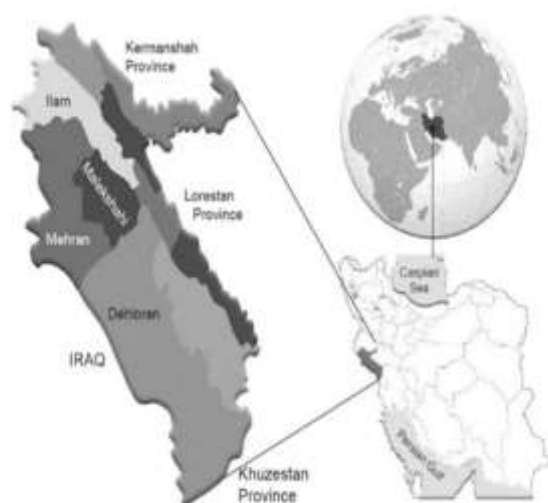


Figure 1. Geographic location of Dehloran County, Ilam Province, Iran

Ethnobotanical Survey

Ethnobotanical data were collected through face-to-face interviews with 30 knowledgeable members of local communities using a semi-structured questionnaire. Before each interview, the objectives and procedures of the study were explained to the participants, and informed consent was obtained. Information was systematically recorded on local and scientific plant names, botanical families, plant parts consumed, harvesting periods and locations, habitats, preparation and processing methods, modes of consumption, and types of culinary use.

Selection of Informants and Sampling Method

Participants were selected using purposive sampling, based on their knowledge and experience in the identification, collection, preparation, and consumption of wild edible plants. Furthermore, snowball sampling was employed to identify additional individuals with extensive indigenous knowledge, based on referrals from initial participants and recognized knowledgeable members of the local community. The study involved residents from several villages in Dehloran County, selected to represent variation in demographic characteristics, including age, gender, occupation, and levels of experience with the traditional use of wild edible plants. Sociodemographic information, including age, gender, educational level, occupation, and years of experience in wild edible plant utilization, was recorded for all participants.

Particular attention was given to whether each plant was consumed raw or cooked and whether it was used as a vegetable, condiment, spice, beverage, fruit, or ingredient in other traditional food preparations. Where necessary, interviews were conducted in the local language to facilitate effective communication and ensure accurate documentation of indigenous terminology, plant names, and traditional food practices.

Data Analysis and Quantitative Indices

The interview data were entered into Microsoft Excel and subsequently organized and analyzed. For each species, the number of participants reporting its use as a food resource, frequency of citation (FC), citation frequency percentage (FC%), use value (UV), and corresponding food-use category were determined.

Frequency of Citation (FC)

Frequency of citation (FC) was defined as the number of participants who independently reported a particular plant species as a food resource:

$FC = \text{number of participants citing the species}$

The citation frequency percentage (FC%) was calculated as follows:

$$FC\% = (FC/N) \times 100$$

where FC represents the number of participants who reported the use of a given species and N represents the total number of participants interviewed (N = 30).

Use Value (UV)

The use value (UV) was calculated to estimate the relative importance of each wild edible plant based on the number of use reports provided by participants:

$$UV = U/N$$

where U represents the total number of use reports recorded for a species and N represents the total number of participants interviewed.

In the present dataset, each species was assigned to a single food-use category; consequently, the calculated UV values were numerically equivalent to FC/N. UV was nevertheless retained as a quantitative indicator to facilitate comparison with previous ethnobotanical studies.

Classification of Food Uses

The documented species were classified according to their traditional food uses into the following categories: edible vegetables; vegetables and condiments; traditional beverages; wild fruits; edible seeds and nuts; flour and traditional food products; and aromatic and spice plants. Classification was based on the actual uses reported by local informants rather than solely on the botanical characteristics of the species.

Comparison with Previous Studies

The documented species and their reported food uses were compared with findings from previous ethnobotanical and ethnofoodbotanical studies conducted in Ilam Province, the Zagros region, and other parts of Iran. This comparison was undertaken to identify species and food-use practices that have been previously documented, as well as those that appear to be less frequently

reported or potentially distinctive to the study area.

Ethical Considerations

Before each interview, the purpose and procedures of the study were clearly explained to the participants. Participation was voluntary and proceeded only after informed consent had been obtained. The confidentiality of information provided by participants was maintained, and the collected data were used exclusively for scientific and research purposes.

Results

The socio-demographic characteristics of the 30 informants participating in the ethnofoodbotanical survey, including gender, age, education, occupation, and experience in wild edible plant use, are presented in Table 1.

The results of the ethnophytobotanical survey conducted in Dehloran County are presented in Table 2. A total of 20 wild edible plant taxa belonging to 13 botanical families were documented as traditionally used as food resources by local communities in the study area. The recorded taxa included *Gundelia tournefortii*, *Rheum* spp., *Prangos ferulacea*, *Tragopogon* spp., *Allium* spp., *Descurainia sophia*, *Portulaca oleracea*, *Plantago* spp., *Cichorium intybus*, *Rubus* spp., *Crataegus* spp., *Pistacia atlantica*, *Quercus brantii*, *Pyrus* spp., *Ficus* spp., *Ziziphus spina-christi*, *Mentha* spp., and *Thymus* spp.

The documented taxa encompassed a diverse range of traditional food uses, including edible vegetables, fruits, seeds and nuts, beverages, aromatic plants, spices, and other traditional food preparations. The qualitative characteristics of the recorded taxa, including their local names, botanical families, plant parts consumed, harvesting periods, habitats, preparation and processing methods, and modes of consumption, are presented in Table 2.

Substantial variation was observed in the frequency of citation among the documented taxa. *Thymus* spp. had the highest citation frequency, with an FC% of 76.67%, followed by *Mentha* spp. and *Ziziphus spina-christi* (73.33% each) and *Pistacia atlantica* (70.00%). The corresponding UV

values were 0.77 for *Thymus* spp., 0.73 for *Mentha* spp. and *Ziziphus spina-christi*, and 0.70 for *Pistacia atlantica*. Other taxa showed lower FC% and UV values, indicating considerable variation in the frequency of reported food use among the documented plants (Table 3). Overall, the findings demonstrate substantial diversity in the wild edible plant resources recognised and utilised by local communities in Dehloran County. The documented variation in citation frequency and use value provides a quantitative basis for comparing the relative prominence of individual plant taxa within the local food-use repertoire. Quantitative data, including the total number of participants (N), the frequency of citation for each plant species (FC), the percentage of citation frequency (FC%), and the use value (UV), are presented in Table 3.

Table 1. Socio-demographic profile of informants participating in the ethnofoodbotanical survey

Variable	Category	Number (n)	Percentage (%)
Gender	Male	20	66.7
	Female	10	33.3
Age group (years)	20–40	6	20.0
	41–60	14	46.7
	>60	10	33.3
Educational level	No formal education	8	26.7
	Primary education	10	33.3
	Secondary education	7	23.3
	University education	5	16.7
Main occupation	Farmer	12	40.0
	Livestock breeder	8	26.7
	Wild edible plant collector	6	20.0
	Other occupations	4	13.3
Experience in using wild edible plants	<10 years	5	16.7
	10–30 years	15	50.0
	>30 years	10	33.3

Table 2. Ethnofoodbotanical characteristics of the documented wild edible plants

Local name	Scientific name	Family	Plant part(s) used	Traditional mode of consumption	Food/Ethnofoodbotanical use	Distribution/likely habitat
Kangar	<i>Gundelia tournefortii</i>	Asteraceae	Young stems and petioles	Cooked; used in stews and pickles	Edible vegetable and ingredient in traditional stews	Rangelands and rocky slopes
Rhubarb	<i>Rheum</i> spp.	Polygonaceae	Petioles	Raw or cooked; used in stews	Food and souring condiment	Mountainous areas and slopes
Paghaze	<i>Prangos ferulacea</i>	Apiaceae	Young leaves and stems	Cooked; used in soups and traditional dishes	Seasonal edible vegetable	Rangelands and Zagros slopes
Shang	<i>Tragopogon</i> spp.	Asteraceae	Young leaves and stems	Cooked; used in soups and traditional dishes	Wild edible vegetable	Rangelands and semi-moist habitats
Wild leek	<i>Allium</i> spp.	Amaryllidaceae	Leaves and bulbs	Raw or cooked; consumed with meals	Aromatic vegetable	Slopes and natural habitats
Wild garlic	<i>Allium</i> spp.	Amaryllidaceae	Bulbs and leaves	Raw or cooked	Flavouring agent and edible vegetable	Mountainous areas
Khakshir	<i>Descurainia sophia</i>	Brassicaceae	Seeds	Soaked in water	Traditional beverage	Barren lands and field margins

Local name	Scientific name	Family	Plant part(s) used	Traditional mode of consumption	Food/Ethnofoodbotanical use	Distribution/likely habitat
Purslane	<i>Portulaca oleracea</i>	Portulacaceae	Young aerial parts	Raw or cooked; used with yoghurt and in salads	Edible vegetable	Agricultural fields and village margins
Plantain	<i>Plantago</i> spp.	Plantaginaceae	Leaves and seeds	Cooked or incorporated into some beverages	Limited/traditional food use	Rangelands and moist soils
Chicory	<i>Cichorium intybus</i>	Asteraceae	Leaves and roots	Raw or cooked; also prepared as an infusion	Vegetable and traditional beverage	Field margins and rangelands
Wild blackberry	<i>Rubus</i> spp.	Rosaceae	Fruits	Raw, as jam, and in homemade preparations	Wild fruit	Valleys and relatively moist habitats
Hawthorn	<i>Crataegus</i> spp.	Rosaceae	Fruits	Raw or processed	Edible fruit and traditional snack	Highland areas and open woodlands
Wild pistachio	<i>Pistacia atlantica</i>	Anacardiaceae	Fruits/seeds	Raw or processed	Edible kernel and traditional food resource	Oak woodlands and Zagros habitats
Oak	<i>Quercus brantii</i>	Fagaceae	Fruit (acorn)	Processed and ground after debittering	Acorn flour and traditional food products	Zagros oak forests
Wild pear	<i>Pyrus</i> spp.	Rosaceae	Fruits	Raw or processed	Wild edible fruit	Forests and Zagros slopes
Wild fig	<i>Ficus</i> spp.	Moraceae	Fruits	Fresh or dried	Fruit and traditional dried food	Warm, rocky habitats
Christ's thorn jujube	<i>Ziziphus spina-christi</i>	Rhamnaceae	Fruits	Raw or dried	Edible fruit	Warmer areas, particularly low elevations
Pennyroyal	<i>Mentha</i> spp.	Lamiaceae	Leaves and young stems	Fresh or dried; used with yoghurt and <i>doogh</i>	Vegetable and aromatic condiment	Water margins and moist habitats
Thyme	<i>Thymus</i> spp.	Lamiaceae	Aerial parts	Dried; prepared as an infusion and used as a condiment	Spice and traditional flavouring agent	Rocky slopes
Wild mint	<i>Mentha</i> spp.	Lamiaceae	Leaves and stems	Fresh or dried	Condiment and aromatic vegetable	Moist and mountainous habitats

Discussion

The present study demonstrates that wild edible plants (WEPs) continue to represent an important component of the ethnofoodbotanical knowledge system of local communities in Dehloran County. Beyond their nutritional contribution, these plants constitute an element of biocultural heritage shaped by long-term interactions between human

societies and their surrounding ecosystems (Martin, 2014, Pieroni et al., 2020).

The documented knowledge extends beyond the identification of edible species and includes ecological awareness, seasonal harvesting strategies, selection of edible plant parts, processing methods, and culturally accepted approaches to preparation and consumption. Such knowledge reflects adaptive practices developed

by local communities to utilize available biological resources and maintain dietary diversity under specific ecological conditions (Turner et al., 2011).

Table 3. Quantitative ethnofoodbotanical data for wild edible plants documented in Dehloran County

Scientific name	FC	FC%	UV
<i>Gundelia tournefortii</i>	12	40.00	0.40
<i>Rheum</i> spp.	10	33.33	0.33
<i>Prangos ferulacea</i>	17	56.67	0.57
<i>Tragopogon</i> spp.	12	40.00	0.40
<i>Allium</i> spp.	18	60.00	0.60
<i>Descurainia sophia</i>	13	43.33	0.43
<i>Portulaca oleracea</i>	7	23.33	0.23
<i>Plantago</i> spp.	8	26.67	0.27
<i>Cichorium intybus</i>	9	30.00	0.30
<i>Rubus</i> spp.	9	30.00	0.30
<i>Crataegus</i> spp.	20	66.67	0.67
<i>Pistacia atlantica</i>	21	70.00	0.70
<i>Quercus brantii</i>	19	63.33	0.63
<i>Pyrus</i> spp.	11	36.67	0.37
<i>Ficus</i> spp.	13	43.33	0.43
<i>Ziziphus spina-christi</i>	22	73.33	0.73
<i>Mentha</i> spp.	22	73.33	0.73
<i>Thymus</i> spp.	23	76.67	0.77
<i>Mentha</i> spp.	20	66.67	0.67

The diversity of food uses recorded in this study indicates that WEPs occupy multiple functional roles within traditional food systems. Seasonal vegetables, including *Gundelia tournefortii*, *Prangos ferulacea*, and *Tragopogon* spp., as well as wild fruits such as *Ziziphus spina-christi*, *Rubus* spp., *Crataegus* spp., and *Pyrus* spp., contribute to seasonal dietary variation and represent culturally significant food resources (Pieroni & Price, 2006). Similarly, the utilization of *Pistacia atlantica* and *Quercus brantii* for edible seeds, kernels, and processed food products reflects traditional strategies for exploiting forest resources and enhancing food availability in rural communities (Zocchi et al., 2022). These practices indicate that WEPs are not merely consumed as supplementary resources during periods of scarcity but are integrated into seasonal diets, cultural practices, and local food identities (Bharucha & Pretty, 2010). Among the recorded species, *Thymus* spp. exhibited the highest frequency of citation (FC = 76.67%) and use value (UV = 0.77). This high level of recognition may be associated with its widespread distribution in Zagros ecosystems, distinctive aromatic characteristics, and frequent incorporation into traditional foods, beverages,

and condiments (Ahmed, 2016, Pieroni & Price, 2006). Aromatic plants often maintain high cultural importance because they combine culinary, sensory, and traditional health-related functions (Ahmed, 2016). Likewise, the high citation frequencies observed for *Mentha* spp., *Ziziphus spina-christi*, and *Pistacia atlantica* suggest that species providing recognizable, palatable, and culturally valued products are more likely to persist within local knowledge systems. However, citation frequency represents the level of recognition among informants and should not be directly interpreted as an indicator of ecological abundance, nutritional superiority, or biological dominance (Menendez-Baceta et al., 2012).

The distribution and persistence of ethnobotanical knowledge within communities are influenced by demographic and social factors, including age, occupation, and gender. Previous studies have demonstrated that traditional plant knowledge is frequently concentrated among older generations due to accumulated experience and prolonged interaction with natural environments (Alkhatib & Abdi, 2026). Individuals engaged in farming, livestock breeding, and plant collection may retain greater knowledge because of their continuous exposure to seasonal changes, habitats, and plant availability (Albuquerque et al., 2013). Gender-based differences may also influence knowledge acquisition and transmission, as women often play important roles in food preparation, processing, and household transfer of culinary practices, whereas men may be more involved in plant collection activities in certain cultural contexts (Howard, 2003). Therefore, future research should examine age- and gender-related patterns of ethnofoodbotanical knowledge transmission to better understand mechanisms of knowledge maintenance and potential erosion.

The documentation of WEP knowledge is increasingly important because traditional food practices are being influenced by socioeconomic transformations, modernization, market integration, and declining reliance on wild food resources (Reyes-García et al., 2013). Reduced interaction between younger generations and natural environments may contribute to the gradual loss of plant identification skills, harvesting techniques, and traditional preparation practices. Accordingly, ethnofoodbotanical

research contributes not only to scientific documentation but also to the conservation of intangible cultural heritage and the preservation of local food traditions (Pieroni, 2001).

The use of forest-derived resources, particularly *Quercus brantii* and *Pistacia atlantica*, further illustrates the close relationship between Zagros communities and their ecosystems. Traditional processing methods, including debittering, drying, and grinding oak acorns into flour, represent sophisticated indigenous technologies developed to transform naturally available plant resources into edible products (Javanmiripour et al., 2023). These practices emphasize the importance of documenting indigenous food-processing knowledge alongside species inventories, as processing techniques often determine the nutritional, sensory, and cultural value of WEPs. Comparisons with previous ethnobotanical investigations in western Iran and neighboring regions reveal both common patterns and local variations in plant-use traditions. Gasemi et al documented 122 plant species belonging to 49 families in Dehloran and Abadan, with emphasis on medicinal applications (Ghasemi Pirbalouti et al., 2013). Although their research focus differed from the present study, similarities in frequently represented families, including *Asteraceae*, *Lamiaceae*, *Rosaceae*, and *Apiaceae*, demonstrate the multifunctional roles of several plant taxa within local knowledge systems. Similarly, studies from the Hawraman region (Advay et al., 2026) Sulaymaniyah Province (Ahmed, 2016), and Hamadan Province (Naghbi et al., 2014) confirm the continuity and regional variation of traditional plant knowledge across western Iran and adjacent areas.

Although quantitative indices such as FC and UV provide valuable measures of species recognition, they should be interpreted together with qualitative cultural information. In the present study, UV values were strongly influenced by citation frequency because each species was assigned to a single food-use category. Therefore, these indices primarily reflect relative cultural recognition rather than direct measures of cultural complexity, nutritional importance, or economic value (Tardío & Pardo-de-Santayana, 2008). Future investigations incorporating nutritional composition, phytochemical analyses, food safety

assessments, and additional ethnobotanical indices, including the Cultural Importance Index (CI) and Relative Frequency of Citation (RFC), would provide a more comprehensive evaluation of WEP potential (Tardío & Pardo-de-Santayana, 2008).

The documented species, particularly *Thymus* spp., *Mentha* spp., *Ziziphus spina-christi*, *Pistacia atlantica*, and *Quercus brantii*, represent valuable candidates for future studies investigating nutritional properties, bioactive compounds, sustainable harvesting strategies, and the development of culturally appropriate food products. Integrating indigenous knowledge with scientific approaches may facilitate the identification of underutilized food resources while supporting biodiversity conservation, cultural preservation, and sustainable rural livelihoods (Bharucha & Pretty, 2010).

The present study provides several novel contributions to ethnofoodbotanical research in western Iran. In contrast to previous ethnobotanical investigations in Ilam Province, which have largely focused on medicinal plant uses, this research specifically explores wild edible plants (WEPs) and the associated cultural practices surrounding their utilization as food resources. The study contributes new information on not only the diversity of edible plant taxa but also the traditional knowledge related to harvesting seasons, edible plant parts, processing techniques, preparation methods, and culinary applications. A particularly important contribution of this research is the documentation of indigenous food-processing practices, including the debittering and transformation of *Quercus brantii* acorns into edible products, which reflects the adaptive strategies developed by local communities to utilize naturally available resources. In addition, the study highlights the cultural significance of aromatic plants, traditional beverages, and condiments within local food systems. These findings demonstrate that wild edible plants represent more than nutritional resources; they constitute an integral component of the Zagros biocultural landscape, where plant use is shaped by ecological adaptation, seasonal availability, and intergenerational transmission of community-based knowledge.

The present study represents one of the first dedicated ethnofoodbotanical investigations in Dehloran County, focusing on wild edible plants rather than medicinal uses. In addition to documenting plant diversity, this research records traditional food practices, including harvesting, preparation, processing methods, and culinary applications. The documentation of practices such as oak acorn debittering, traditional beverages, and condiment preparation highlights the importance of Zagros food heritage and indigenous ecological knowledge. Future studies should focus on nutritional composition, phytochemical profiles, food safety assessment, and the potential development of value-added food products from culturally important species. Moreover, investigations on knowledge transmission among different age groups and genders are needed to evaluate the continuity and possible decline of ethnofoodbotanical knowledge.

Conclusion

The present study indicates that wild edible plants (WEPs) continue to contribute to the food-related knowledge and traditional practices of local communities in Dehloran County. The documented taxa encompass diverse food uses, including seasonal vegetables, wild fruits, edible seeds and kernels, aromatic plants, condiments, and traditional beverages, reflecting locally transmitted knowledge of plant identification, harvesting, preparation, processing, and consumption. These practices underscore the enduring relationship between local communities and the plant resources of the Zagros region. Among the documented taxa, *Thymus* spp., *Mentha* spp., *Ziziphus spina-christi*, and *Pistacia atlantica* showed the highest citation frequencies, indicating their greater representation within the local repertoire of food-related plant knowledge. The documentation of these plants and their associated traditional practices is particularly important in the context of changing lifestyles and the potential erosion of intergenerational ethnobotanical knowledge. Future studies should priorities frequently reported and culturally prominent WEPs for nutritional, phytochemical, food-safety, processing, and food-product development investigations. Integrating indigenous knowledge

with scientific evaluation may facilitate the responsible utilization of underutilized food resources while supporting biodiversity conservation. Overall, systematic documentation of ethnofoodbotanical knowledge can contribute to the preservation of intangible cultural heritage and the sustainable use of wild food resources in the Zagros region.

Declarations Conflict of Interest

The authors declare no conflicts of interest.

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Consent for Publications

The authors certify that that this work in its final form has been thoroughly reviewed and approved for publication.

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Funding acquisition: Ehsan Bahmani¹ and Azza Dawoud

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Visualization: Ehsan Bahmani and Azza Dawoud

Writing – original draft: Azza Dawoud

Writing – review & editing: Azza Dawoud

Ethical Considerations

This study was performed in line with the principles of the Declaration of Helsinki

AI Use Disclosure

AI was used only for English language editing, grammar correction, and improving clarity and readability. The authors take full responsibility for the scientific content.

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