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ETHNOBOTANICAL PROFILE OF UNION COUNCIL PEERAN DISTRICT MANSEHRA, KHYBER PAKHTUNKHWA.

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ABSTRACT

The study area is located in the Mansehra district of Khyber Pakhtunkhwa. The current study was conducted to examine the ethnobotanical profile of Union Council Peeran, which lies in District Mansehra. The region is endowed with a wide variety of unique flora. The people's household requirements are met by plant resources. A total of 146 plant species are used by the people of Union Council Peeran for various reasons in their everyday life. 45 (31.7%) species are used as traditional medicines, 67 (45.2%) species are used as fodder, 27 (18.24%) species are used as fuel, 20 (13.51%) species are used as timber, and 26 (17.56%) species are used as vegetables. There were 21 (14.18%) different species of fruit plants, 1 (0.6%) of them were used as agricultural crops, and 2 (1.3%) of them were utilized as field boundaries. Poaceae and Rosaceae were the most prosperous families in the region. It was discovered that the local inhabitants employed various plant species for straightforward or multifaceted functions. The medicinal plants of the region were used to treat a variety of illnesses, including toothaches, bodily pain, indigestion, wound healing, asthma, abdominal discomfort, fever, skin disorders, and stomach pain. This study will assist researchers, traditionalists, taxonomists, and strategy developers in addressing the current state of plants.

INTRODUCTION

Humans have relied on plants for thousands of years due to numerous ecological services that plants provide, such as providing food, medicine, fuel, and wood to sustain life on earth (Ijaz *et al.,* 2016; Ullah *et al.,* 2020). There are more than 20,000 species of wild plants in the globe, but only twenty plant species provide 90% of the world's food requirement (Usman *et al.,*2021). In rural areas of underdeveloped countries, the use of plant species as traditional medicines offers a viable alternative to healthcare services (Hayta *et al.,*2014).

Around 80% of the population in poor nations is thought to rely on traditional medicines as their primary form of healthcare (Umair *et al.,*2017). In various ecological zones, Pakistan possesses a wide variety of medicinal plants. The nation is home to more than 600 medicinally important types of wild plants (Hamayun *et al.,*2003). According to Hussain et al. (2012) and Kanwal et al. (2017), Pakistan is Asia's seventh-largest producer of medicinal plants. In Pakistan, the majority of people depend on herbal drugs (Usman *et al.,*2021).

Ethnobotany is a crucial component of a society's indigenous or local knowledge. People, Plants, Interactions, and Uses are the four words that best describe ethnobotany.
While the ethnobotanist investigates how plants are used as food, housing, medicine, clothing, hunting, and in religious sites, ethnobotany is the study of how the inhabitants of a specific culture and location make use of indigenous plants. It is a branch of knowledge that investigates "the interaction between a specific society and its environment, particularly the plant world" (Hamayun *et al.*,2005).
The knowledge of plants and their usage varies among different groups or communities (Ahmad et al. (2011). On the one hand, ethnobotanical studies were devoted to advancing our understanding of plant biodiversity (while also taking into account biological diversity and human awareness of uses, resource, applications, and conservation) and, on the other hand, using this knowledge to inform future social and scientific interventions (Parada *et al.*,2009).

The study area which known as Union council Peeran lies in the district Mansehra, Khyber Pakhtunkhwa, Pakistan (www.nrb.gov.pk).The total area covered by district Mansehra is 4579 km2 (SMEDA.,2009). District Mansehra is divided into three tehsils i-e, Mansehra, Oghi and Balakot (Khan *et al.*,2018). Tehsil council Mansehra consists of 48 union councils. Union council Peeran is one of the largest union councils of the tehsil Mansehra according to population and area (www.pbscensus.gov.pk).The tehsil Peeran is named because of its founder inhabitants were Syeds (called as peers). So, it is called as Peeran. This is elevated at 2000 m above the sea level. The location coordinates of Peeran are 34019’48’’N and 73018’14’’E. Union council Peeran makes its boundaries in the north with Bakrial city, in west with Mansehra, in south with Barhn (area of Abbottabad), in east with Garhi Habibullah.

In recent decades, the study of medicinal plants using qualitative survey techniques has gained importance. The creation of medicines, cosmetics, food, and dietary supplements heavily relies on the medicinal flora. The majority of the indigenous populations still rely on medicines made from plants (Shah *et al.*,2020). We are unaware of any research that has been done to clarify the ethnobotanical potential of regional flora in the current study area. In order to gather the traditional ethnobotanical knowledge about various plants in all villages of Union Council Peeran in District Mansehra, Pakistan, this study was carried out.

MATERIAL AND METHODS

The current research was conducted in 2019 from March to September. During this time, the research area served as a place to gather information about the region's ethnobotany, conservation efforts, and plant diversity. Each study excursion was carefully planned and carried out. The research project was completed in three phases. These include gathering literature, going on research expeditions, and documenting the information gathered from the several villages of union council Peeran.

Fieldwork was done to investigate into the variety of plants and their ethnobotanical applications. Interviews and observations with local inhabitants are part of the fieldwork. While visiting several

villages, the observations were made. All of the plants were picked, pressed, and preserved while they were in the flowering/fruiting stage. Interviews with the locals were done while conducting field work. In order to obtain qualitative information regarding the plant resources and the locals' use of them, questionnaires were used during the surveys. Questions regarding the usefulness of various plants, the number of plants used, the availability, the rate of consumption, the availability, and the fuel wood/fodder head loads had been asked.

RESULTS

The findings showed that the local population of the area employed 26 (17.56%) vegetable species, 67 (45.2%) fodder species, 27 (18.24%) fuel species, 20 (13.51%) timber forests, and 45 (31.7%) species of traditional medicinal herbs. There were 21 (14.18%) different species of fruit plants, 1 (0.6%) of them were used as agricultural crops, and 2 (1.3%) of them were utilized as field boundaries. The most prosperous and significant families in the region were the Rosaceae and Poaceae families. It was discovered that the locals employed various plant species for simple or multifaceted functions. The medicinal plants of the region were used to treat a variety of illnesses, including toothaches, bodily pain, indigestion, wound healing, asthma, abdominal discomfort, fever, skin disorders, and stomach pain.

MEDICINAL PLANTS

For curing a variety of diseases, the local peoples of the area partially depend on the medicinal plants. The most important species were *Artemisia absinthium, Foeniculum vulgare Fumaria officinalis, Berberis lycium, Olea ferruginia, Plantago lanceolata, Valeriana jatamansi, Chenopodium ambrosioides, Oxalis corniculata, Plantago lenceulata and Rumex dentatus, Zanthoxylum armatum.* The local peoples of the area used the plants to treat various illness like respiratory, digestive, wound healing, eyes improvement, toothache, skin diseases and diabetes

FODDER SPECIES

A sum of 67(45.2%) plant species used as fodder by the grazing animals including goat, sheep, cow and buffalo. The main fodder species included *Cynodon dactylon, Melia azedarach, Morus alba, Morus nigra, Berberis lycium* and all type of grasses.

FUEL WOOD SPECIES

The result revealed that the inhabitants of the investigated area used 27 (18.24%) plant species for fuel purposes. The plant species used as fuel wood included *Morus sps Morus nigra, Melia aza drach, Pinus roxburghii, Poplus termula and Quercus incana* were used as a timber wood.

Table 1. Summary and Key of Ethnobotanical uses of Plants

S.no	Key	Plants use description	No of Species	Percentage
1	MP	medicinal plant	45	31.70%
2	FO	Fodder species	67	45.20%
3	FU	Fuel specie	27	18.24%
4	TW	Timber wood	20	13.51%
5	VE	Vegetables	26	17.56%

6	FY	Fruit yielding	21	14.18%
7	AC	Agricultural crop	1	0.60%
8	FF	Fencing field border	2	1.30%

Table 2. Ethno botanical profile of Union Council Peeran

S.No	**Species**	**Family**	**Habit**	Ethnobotanical uses
1	*Acacia modesta* Wall.	Fabaceae	Tree	FO
2	*Achyranthus aspera* L.	Amaranthaceae	Herb	MP
3	*Ajuga reptans* L.	Lamiaceae	Herb	MP
4	*Alianthusaltissima(*Mill.)Swingle	Simaroubaceae	Tree	FO
5	*Alnus nitida* (Spach) Endl.	Betulaceae	Tree	FO,FU,TI
6	*Amaranthus viridis* L.	Amaranthaceae	Herb	VE,FO
7	*Artemisia absinthium* L.	Asteraceae	Herb	MP
8	*Asparagus officinalis* L.	Asparagaceae	Herb	MP
9	*Avena sativa* L.	Poaceae	Herb	FO
10	*Berberis lycium* Royle.	Berberidaceae	Shrub	MP
11	*Barleria cristata* L.	Acanthaceae	Herb	MP
12	*Bauhinia variegata* (L) Benth.	Fabaceae	Tree	FO,FU,VE
13	*Bergenia ligulata* (Wall.) Engl.	Saxifragaceae	Herb	VE
14	*bistorta amplexicaulis* (D. Don) Greene.	Polygonaceae	Herb	MP,VE
15	*Brachiaria ramosa* (L.) stapf	Poaceae	Herb	FO
16	*Brassica rapa* L.	Brassicaceae	Herb	FO,VE
17	*Broussonetia papyrifera* (L.) Vent.	Moraceae	Tree	FO,FY
18	*Commelina benghalensis* L.	Commelinaceae	Herb	MP,FO,VE
19	*Cannabis sativa* L.	Cannabaceae	Herb	MP
20	*Capsella bursa pastoris*(L.) Medik	Brassicaceae	Herb	FO

21	*Capsicum annuum* L.	Solanaceae	Herb	VE
22	*Carrisa opaca* Stapf. ex Haines	Apocynaceae	Shrub	MP
23	*Celtis eriocarpa* Decne.	Cannabaceae	Tree	FO
24	*Cenchrus setaceus* (Forssk.) Morrone	Grameniae	Herb	VE
25	*Centratherum intermedium*	Asteraceae	Herb	FO
26	*Chenopodium ambrosioides* Linnaeus	Amaranthaceae	Herb	MP.VE
27	*Citrullus colocynthis* (L.) Schrad	Cucurbitaceae	Herb	VE
28	*Clematis vitalba* L.	Ranunculaceae	Shrub	MP,VE
29	*Commeliana bengalensis L.*	Commelinaceae	Shrub	MP,FO,VE
30	*Cotoneaster microphyllus* - Wall. ex Lindl	Rosaceae	Shrub	MP,FO,FU
31	*Crotolaria incana* L.	Fabaceae	Shrub	
32	*Cichorium intybus* L.	Asteraceae	Herb	MP
33	*Cymbopogan citratus* (DC.) Stapf	Poaceae	Herb	FO
34	*Cynodon dactylon* (L.) Pers	Poaceae	Herb	FO
35	*Cyperus cephalotes* Vahl	Cyperaceae	Herb	FO
36	*Cyperus involucatus*	Cyperaceae	Herb	FO
37	*Cyperus longus* L.	Cyperaceae	Herb	FO
38	*Cyperus rotundus* L.	Cyperaceae	Herb	FO
39	*Cyperus schomburgkianus* var. trilobatus Kük.,	Cyperaceae	Herb	FO
40	*Cyperus trachysanthos* Hook. & Arn.	Cyperaceae	Herb	FO
41	*Dalbergia sissoo* Roxb.	Fabaceae	Tree	FU
42	*Daphne mucronata* Royle.	Thymelaeaceae	Shrub	MP,FO,FU
43	*Debregeasia salicifolia* (D.Don) Rendle	Urticaceae	Shrub	
44	*Desmodium elegans* DC	Fabaceae	Shrub	MP,FO,FU
45	*Dodonaea viscosa* Jacq.	Sapindaceae	Shrub	FO,FU
46	*Dicliptera foetida* (Forssk.) Blatter	Acanthaceae	Herb	FO

47	*Diospyros japonica* L.	Ebenaceae	Tree	FY
48	*Diospyros lotus* L.	Ebenaceae	Tree	FY
49	*Eleagnus umbellate* Linn.	Elaeagnaceae	Tree	FY,FO
50	*Erigeron sumatrensis* Retz.	Asteraceae	Herb	MP,FO
51	*Eriobotrya japonica* (Tunb.) Lindl.	Rosaceae	Tree	FY
52	*Euclyptus citrodora*-Hook.	Myrtaceae	Tree	MP,FU,TI
53	*Euphorbia characias* L.	Euphorbiaceae	Tree	MP
54	*Euphorbia heliscopia* L.	Euphorbiaceae	Shrub	MP
55	*Euphorbia* spp	Euphorbiaceae	Herb	FO
56	*Fallopia convolvulus* L.	Polygonaceae	Herb	FO
57	*Ficus carica* L.	Moraceae	Herb	FU,TI,FY
58	*Ficus palmata* Forsskål	Moraceae	Tree	FU,TI,FY
59	*Ficus racemosa* L.	Moraceae	Tree	FU,TI,FY
60	*Foeniculum vulgare* Mill.	Apiaceae	Tree	MP
61	*Fragaria nubicula* Lindl ex. Lacaita	Rosaceae	Herb	FO
62	*Fraxinus excelsior* L.	Oleaceae	Herb	FU.TI
63	*Fumaria officinalis* L.	Papaveraceae	Tree	MP
64	*Galeopsis tetrahit* L.	Lamiaceae	Herb	
65	*Galium aparine* L.	Rubiaceae	Herb	FO
66	*Geranium carolinianum* L.	Geraniaceae	Herb	MP,FO
67	*Geranium robertianum* L.	Geraniaceae	Herb	MP.FO
68	*Grewia tenax* (Forsk.)	Tiliaceae	Tree	FO.FU
69	*Hedra helix* L.	Araliaceae	Herb	
70	*Hibiscus* L.	Malvaceae	Shrub	FO
71	*impatience bicolor* Royle.	Balsaminaceae	Herb	MP,FO
72	*Imperata cylindrica* L.	Poaceae	Herb	FO
73	*Indigofera hetrantha* Wall.	Fabaceae	Shrub	MP,FO,FU.TI
74	*Indigofera tinctoria* L.	Fabaceae	Shrub	MP,FO,FU.TI

75	*Ipomea purpurea* L. (Roth)	Convolvulaceae	Herb	FO
76	*Juglans regia* L.	Juglandaceae	Tree	TI.FY
77	*Lantana camara* L.	Verbenaceae	Shrub	FE
78	*Laserpitium gallicum* L.	Apiaceae	Herb	
79	*Lepidagath*is *rigida* Daiz	Apiaceae	Herb	
80	*Lotus corniculatus* L.	Fabaceae	Herb	FO
81	*Malus domestica* Borkh.	Rosaceae	Tree	FY
82	*Medicago polymorpha* L.	Fabaceae	Herb	FO
83	*Melia azedarach* L.	Meliaceae	Tree	MP,TI
84	*Mentha arvensis* L.	Lamiaceae	Herb	MP
85	*Mentha longifolia* L.(Huds)	Lamiaceae	Herb	MP
86	*Mentha sylvestris* L.	Lamiaceae	Herb	MP
87	*Micromeria biflora* Druce.	Lamiaceae	Shrub	MP,FO,FU
88	*Mirabilis jalapa* L.	Nyctaginaceae	Herb	FO,VE
89	*Morus nigra* L.	Moraceae	Tree	FO,TI,FY
90	*Morus alba* L.	Moraceae	Tree	FO,TI,FY
91	*Nerium spp* L.	Apocynaceae	Herb	MP
92	*Ocimum bascillum* L.	Lamiaceae	Herb	MP.VE
93	*Oenothera rosea* L'Hér. ex Aiton	Onagraceae	Herb	FO
94	*Olea europaea* sb sp. Cuspidata (Wall & G. Don)	Oleaceae	Tree	FU,TI
95	*Olea ferrugenia* Royle.	Oleaceae	Tree	MP,FO,TI
96	*Oplismenus hirtalis* L. (P.) Beauv.	Poaceae	Herb	
97	*Origanum vulgare* L.	Lamiaceae	Herb	FO,VE
98	*Oxalis corniculata* L.	Oxalidaceae	Herb	MP,FO
99	*Parthenium hysterophorus* L.	Asteraceae	Herb	
100	*Phelum pretense* L.	Poaceae	Herb	FO
101	*Physalis peruviana* L.	Solanaceae	Herb	MP,VE
102	*Pinus roxburghii* Sarg.	Pinaceae	Tree	FU,TI

103	*Pistacia chinensis* Bunge.	Anacardiaceae	Tree	FU,TI
104	*Plantago lanceolata* L.	Plantaginaceae	Herb	MP,VE
105	*Polygonum spp* L.	Polygonaceae	Herb	FO
106	*Populus tremula* L.	Salicaceae	Tree	FU,TI
107	*Portulaca oleraca* L.	Portulacaceae	Herb	FO,VE
108	*Potentilla reptans* L.	Rosaceae	Herb	
109	*Prunus armanica* L.	Rosaceae	Tree	FY
110	*Prunus persica* L.	Rosaceae	Tree	FY
111	*Punica granatum* L.	Lythraceae	Shrub	FY
112	*Pyrus calleryana* Decne.	Rosaceae	Tree	FY
113	*Pyrus pashia* L.	Rosaceae	Tree	FY
114	*Quercus incana* `Bartram	Fagaceae	Tree	FO,FU,TI
115	*Ranunculus muricatus* L.	Ranunculaceae	Herb	MP
116	*Rhododendron aboreum* SM.	Ericaceae	Shrub	FO,FU,TI
117	*Robinia pseudo-acacia* L.	Fabaceae	Tree	FO,FU
118	*Rosa moschata* Herrm.	Rosaceae	Shrub	FO,FU
119	*rosa tomentosa* SM.	Rosaceae	Shrub	FO
120	*Rosmarinus spp* L.	Lamiaceae	Herb	MP,FU
121	*Rubus caesius* L.	Rosaceae	Shrub	FU,FY
122	*Rubus fruticosus* L.	Rosaceae	Shrub	MP,FY
123	*Rumex dentatus* L.	Polygonaceae	Herb	MP,VE
124	*Rumex histalis* L.	Polygonaceae	Herb	VE
125	*Salix babyllonica* L.	Salicaceae	Tree	FO,FU,TI
126	*Sapindus mokorossi* Gaertn.	Sapindaceae	Tree	MP
127	*Typhonium venosum (*Dryand. ex Aiton) Hett.& P.C.Boyce	Araceae	Herb	
128	*Scobiosa columbaria* L.	Caprifoliaceae	Herb	VE
129	*Siegesbeckia orientalis* L.	Asteraceae	Herb	VE
130	*Silene dioca (L.)* Clairv	Caryophyllaceae	Herb	FO

131	*solanum nigrum* L.	Solanaceae	Herb	FO,VE,FY
132	*Sonchus asper* L.	Asteraceae	Herb	VE
133	*Stellaria media* L. (Vill.)	Caryophyllaceae	Herb	FO
134	*Taraxacum officinail* L.	Asteraceae	Herb	FO,VE
135	*Tegetes erecta* L.	Asteraceae	Herb	FO,VE
136	*Tricodesma indicum* L.	Boraginaceae	Herb	MP
137	*Trifolium repens* L.	Fabaceae	Herb	FO,VE
138	*Valeriana jatamansii* Jones.	Valerianaceae	Herb	MP,FO
139	*Verbascum densiflorum* Betrol.	Scrophulariaceae	Herb	MP
140	*Verbascum thapsus* L.	Scrophulariaceae	Herb	MP
141	*Verbena rigida* Spreng.	Verbenaceae	Herb	FO
142	*Vicia faba* L.	Fabaceae	Herb	FO
143	*Vitex negundo* L.	Lamiaceae	Tree	FE
144	*Zanthoxylum armatum* DC.	Rutaceae	Shrub	MP
145	*Zea mays* L.	Poaceae	Herb	AG
146	*Zinnia elegans* Jacq.	Asteraceae	Herb	
147	*Ziziphus jujuba* Mill.	Rhamnaceae	Tree	FY
148	*Zizyphus oxyphylla* Edgew.	Rhamnaceae	Shrub	FY

DISCUSSION

According to Ayub et al. (2004), plants are a priceless gift from nature, and both floral biodiversity and land are loans that we can use and benefit from in the future. Plants provide a variety of useful products, including instant food, medicines for illnesses, animal feed and forage, fuel wood for burning, flowers for aesthetic and festive purposes, raw materials for various businesses, and lumber for construction (Shah, 2007). Along these lines, local vegetation is necessary for human life, either directly or indirectly (Delcourt, et. al.,1986). The most readily available source of goods and revenue for helpless social orders is plant resources, which are therefore the subject of intense conflict. For ecosystems to continue functioning and to continue providing ecosystem services, reasonable use and protection of biodiversity are essential (Kienast *et al.*, 2009; Khan *et al*., 2013b).

The investigated area is remote and small, and some residents of the local community rely on the usage of produced crude medications in the form of juice, paste, water extracts, and tablets made of powder. According to our report 45 plants were investigated as medicinal plants so that indigenous people employed many plant species as tonics and remedies for a variety of illnesses, including toothaches, backaches, headaches, body aches, abdominal aches, indigestion, wound healers, coughs, and skin issues. These plant species, in whole or in part, can be utilized to create a home cure for treating illnesses. Because of the region's harsh climate, particularly in the winter, its residents frequently take advantage of various plant species and geographical features by engaging in activities like building roads, lighting bonfires in the summer, cutting wood, grazing livestock for food, and gathering medicinal plants. As a result, many plant species are facing intense anthropogenic pressure and are likely to disappear from the region in the near future. Many authors used various methodologies to address these difficulties in diverse contexts.

In Malakand district 62 ethno-medicinal plants belonging to 37 families were documented by Begum *et al.*,2022. Similarly, fifty-eight medicinal plant were explored by Usman *et al.*,2021 in high temperature area of Southern Punjab. In the Chagharzai Valley, District Buner, and Pakistan, 124 significant plant species were documented by Sher et al. in 2011. Our findings were further validated by Ullah *et al.,* (2010) publication on the traditional knowledge of 34 medicinal plant species from Pakistan's Darra Adam Khel NWFP. Similar works from various regions were recorded by different authors. Important medicinal plants from diverse regions of the nation were also documented by Hussain et al. (2005), Jan et al. (2010), and Sher et al. (2011). They discovered 33 plant species with therapeutic use from 18 families.

Peoples of the area are poor and live far from the city, they keep pets at home to meet their requirements. During a visit to the research area, numerous animals, including goats, sheep, buffalo, and cows, could be seen grazing. The majority of plant species in the area under investigation were used as fodder. Different plants, including *Cynodon dactylon, Vicia sativa, Grewia tanix, Morus alba, and Acacia modesta*, were eaten as fodder by various grazing animals, including goats, sheep, and cattle due to their high nutritional contents. The findings indicated that 67 (45.2%) plant species, were used as fodder for grazing animals including goat, sheep, and cattle. 37 plant species were reported to be used as pasture on Ranyal Hill in the District of Shangla by (Ibrar et al. in 2007). Similarly, 75 plant species were documented as forage species in Semi-arid area of District Kasur by Arshad *et al.*,2022. In Chagharzai Valley of District Buner 66 species of fodder plants from were mentioned by Sher et al. in 2011. According to Chandra *et al.*,2018 eighty-six plants were recorded as fodder plant species in Hamirpur district of Himachal Pradesh. 115 species of fodder plant were reported by Rahman *et al.*,2022 in district Buner.

Due to a scarcity of gas facilities and other resources, the local population uses these plants brutally. Because the local temperature is too low in the winter, daily activities are confined to the home. The people

employed a variety of plant species as fuel because they were readily available and had a high heat value, they chose to burn plants like *Morus alba, Morus nigra, Pinus roxburghii, Fucus palmata, and Melia azadrach* because they have a high heat value, burn for a longer period of time, and emit less smoke. The findings indicated that 27 (18.24%) species of the flora were chopped and collected by the locals for use as fuel. 51 fuel wood species were reported from Pakistan's Chagharzai Valley, District Buner, by Sher et al. in 2011. 26 native fuel wood sources were documented by Khan et al. in 2015.

In the research area timber wood species were being used for construction. Since a long time ago, wood has been used by humans for a variety of things, including the creation of furniture, games, and home décor. Nevertheless, wood is a convenient and affordable building material in the study region. 20 (13.51%) plant species were used as a source of timber by the local population. Similar discoveries were made by Sher et al. (2011), who found 21 different species of wood from Pakistan's Chagharzai Valley, District Buner. Musharaf *et al.*,2013 reported 16 timber wood and 47 fuel wood species in Takht e Nasratti of district Karak.

Due to their poverty and lack of easy access to markets, the majority of the inhabitants in the study region prefer to use wild plant species as vegetables. Growing veggies for their own consumption is another native custom. Many plant species are utilised in cooking as vegetables. *Amaranthus viridis, Chenopodium ambrosioides, Medicago polymorpha, Rumex histalis, and Bauhinia variegata* were only a few examples of the wild plants whose leaves and young shoots are utilized as vegetables. These vegetables, also referred to as saag, were delicious. According to our research, 26 (17.56%) plant species. Were consumed as wild vegetables. Hamayun (2005) backed up the conclusions of this study. Our findings are consistent with those of Ahmad *et al.*,2019, According to them 25 wild vegetable species were documented from northwest of Pakistan while Sher et al. (2011), identified 36 plant/herb species. Similarly, Cheng *et al.*,2022 recorded 71 wild vegetables plant species in northwestern region of China.

In the area under investigation, various wild plant species have been exploited for fruits for a long time. There is an urgent need to protect these wild plant species because the local people in the research region were unaware of how to gather, prepare, and packing these precious fruits. The findings showed that 21 plant species are employed to produce fruits. Our results concur with those of Ibrar et al. (2007), who listed 18 edible species from Ranyal Hill in Shangla. Similarly, 52 wild fruit yelding plant species were recorded by Cheng *et al.*,2022 in northwestern region of Yunnan, China. Wang *et al.*,2020 recorded 34 fruit yielding plant species,In the Malam Jaba Coniferous Forest in Swat, Sher and Al-Yemni (2011) discovered 14 different varieties of wild fruit.

In order to protect their fields from grazing and shortcut routes, we noticed that field fence was frequently used close to villages. The majority of plant species used have spines and a bush-like appearance. This kind of fencing material is affordable and were around for a while.in the research area two plant species are employed for fences, according to the investigation. Our findings concur with those made by Sher et al. (2011), and Sher and Al-Yemni (2011), Khan et al.2015; Zaman et al.2014; Samreen *et al*.,2021, who noted similar utilization of plants from various regions of the country.

CONCLUSION

The results of the current investigation indicated that the region has a wide variety of plant species. The most extreme relevance of the studied area in terms of its plant biodiversity and area was taken into consideration when this research was developed. The bulk of reported plants were used by the locals as medicines, mostly wild vegetables and timber plants. It was observed that a sizable number of the residents of the research region were unaware of the loss of natural flora. The main factor contributing to the region's declining plant diversity, particularly among endemic plant species is anthropogenic disturbances. The biodiversity of the area must be preserved in order to supply the resources and resource alternatives necessary for the people's survival in the future. There is a need for more investigation, including thorough documentation of an examination of their nutritional potential and therapeutic impacts.

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