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Research Article

Ethnobotanical Study of Tehsil Kabal, Swat District, KPK, Pakistan

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A total of 140 plants have been reported ethnobotanically from Tehsil Kabal, Swat District. These include the 133 plants (95%) of angiosperms, 3 (2.14%) of gymnosperms, and 2 (1.42%) each of pteridophytes and fungi. The largest family is Lamiaceae represented by 11 species followed by Rosaceae represented by 9 species. Among angiosperms 76 (55.63%) were herbs, 17 (12.78%) were shrubs, and 40 (30.07%) were trees; 127 plants (95.48%) were dicot while 6 plants (4.51%) were monocot. Most of the plants were used for more than one purpose. Generally the plants were used for medicinal, fuel, timber wood, food, and fodder for cattle purposes.

1. Introduction

Ethnobotany is a biological, economic, and cultural interrelationship study between people and plants of an area in which they exist [1]. Ethnobotanical studies focused on contributing to plant biodiversity knowledge (taking into account that the biological diversity as well as human awareness about the uses, applications, and natural resource conservation) on one hand and take this knowledge for further social and scientific interventions on the other hand [2]. Ethnobotanical research also helps in establishment of priorities of local community to ensure that the local values are translated into rational use of resources and effective conservation of biological diversity and cultural knowledge [3]. More than 5000 plant species belonging to angiosperms are used worldwide for medicinal purposes [4]. Medicinal plant products have been used successfully for various ailments both externally and internally. Despite the increasing use of synthetic drugs, plants materials have persisted as the "treatment of choice" as they have no or less side effects [5]. The present study was conducted to explore indigenous knowledge of plants from Tehsil Kabal, Swat District, KPK, Pakistan. Tehsil Kabal, Swat District, Khyber Pakhtunkhwa, Pakistan is located at 34°47′ North and 72°17′ East. Average elevation of the area is about 2400 to 2550 feet. The inhabitants of the area are mostly connected to farming rearing upon livestock and their products and also on the forest products. Health facilities are scarce, especially in the upper parts of the Tehsil, with only one government hospital situated in the Kabal village. Similar types of studies have also been carried out in KPK and other parts of the country by Abbasi et al. [6], Kamal et al. [7], Ali and Qaiser [8], Ibrar et al. [3], Hussain et al. [9], Bukhsh et al. [10], Qureshi et al. [11], Zabihullah et al. [12], and many others.

It is clear that no such study has been done on the plants of this remote area where residents still use plants to cure various ailments. With the advancement of communication systems and education facilities, the local communities are being exposed to modern facilities, and in most cases, traditional knowledge has been replaced with modern knowledge. The present study was tried to document the traditional knowledge of plants utilization of this area.

2. Materials and Methods

The present study was undertaken from August to September, 2010, to document the local uses of some indigenous plants of Tehsil Kabal, Swat, KPK, Pakistan. Information

Table 1: Ethnobotanical information of plants from Tehsil Kabal, Swat District, KPK.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(1)	*Agaricus campestris* L.	Kharerhay	Agaricaceae	Mushroom	Cooked as food.
(2)	*Adiantum capillus-veneris* L.	Sumbal	Adiantaceae	Herb	Leaf decoction, used for cough and fever.
(3)	*Ajuga bracteosa* Wall.ex Benth.	Butey	Lamiaceae	Herb	The plant is used to relive abdominal pain. Also used to cure pimples and itch. In the past the plant was used to treat chicken pox. Some locals also used it for jaundice.
(4)	*Ajuga parviflora* Benth	Butey	Lamiaceae	Herb	Used in hepatitis, fever, treating tonsillitis, and other throat problems.
(5)	*Avena sativa* L.	Jamdaray	Poaceae	Herb	Spikes are used as nerve tonic, laxative, and antiseptic. The plant is also used as fodder.
(6)	*Atropa acuminate* Royle.	Bhange Dewana	Solanaceae	Herb	Used as sedative.
(7)	*Artemisia scoparaia*. Waldst & Kitam	Jawkay	Asteraceae	Herb	Young shoots are used as antihelminthic agent in human and livestock also used for diarrhea. Mature shoots are used for making brooms and also used as thatching material. The plant is also used as fuel.
(8)	*Artemisia absinthium* L.	Dhada Tarkha	Asteraceae	Herb	Shoots are used for typhoid. Also used for conceiving pregnancy.
(9)	*Alnus nitida* (Spach) Endl.	Gheray	Betulaceae	Tree	Wood is used in timber and making furniture. Dry leaves are used as fodder for cattle.
(10)	*Alisma plantago*—aquatica L.	Jabai	Alismataceae	Herb	Leaves are used as tonic, treating diabetes, dysentery, digestive, and renal problems. Also used for treatment of leprosy.
(11)	*Alianthus altissima* L.	Spena Bakyanra	Simaroubaceae	Tree	Leaves are used as fodder; wood is used for fuel and for timber.
(12)	*Achyranthes aspera* L.	Spay botay	Amaranthaceae	Herb	Leaves are used as blood purifier.
(13)	*Acorus calamus* L.	Skhawaja	Araceae	Herb	Rhizome used for stomach inflammation constipation and other digestive problems. Also used for asthma.
(14)	*Accacia nilotica* (L.) Delile.	Kikar	Mimosaceae	Tree	Gum is used as antihelmentic agent, while flower along with sugar is used for cough.
(15)	*Acacia modesta* Wall.	Palosa	Mimosaceae	Tree	Gum is used for impotency and as tonic. Wood is used for fuel.
(16)	*Amaranthus viridis* L.	Ganhar	Amaranthaceae	Herb	Leaves are cooked as vegetable. Young plants are also used as fodder. Dry plants are used as fuel.
(17)	*Aesculus indica* (Wall. ex Camb.) Hook.f.	Jawaz	Sapindaceae	Tree	Fruit is used in abdominal pain. Leaves are used as fodder for cattle. Wood is used for furniture, as timber, and fuel wood.
(18)	*Buxus wallichiana* Baillon	Shamshad	Buxaceae		Leaves are used as purgative.
(19)	*Berberis lyceum* Royle.	Kwaray	Berberidaceae	Shurb	Root bark is used for treatment of hepatitis, blood purifier, in throat infection, and in asthma. The plant is also used as fuel.
(20)	*Cuscuta reflexa* Roxb.	Paprha (Zelai)	Cuscutaceae	Herb	Stem is used for fever and skin itching, also used as antifertility agent.
(21)	*Cupressus sempervirence* L.	Sarwa	Cupressaceae	Tree	The fruit is used as warming agent, anthelmintic, and astringent. Cultivated in gardens as ornamental tree. Wood is used as fuel.
(22)	*Cotoneaster nummularia* Fiseh & Mey.	Kharawa	Rosaceae	Tree	Fruit is used as astringent and expectorant. Wood is used as fuel. Leaves are used as fodder for cattle.
(23)	*Cotoneaster microphyllus* Wall. Ex Lindley.	Mamanrha	Rosaceae	Tree	Fruit is edible. Stolons are used as haemostatic. Wood used as fuel.
(24)	*Chenopodium ambrosioides* L.	Skhabotay (Kamasal Bhang)	Chenoppdiaceae	Herb	Juice of shoot is used for fever, especially for malarial fever.

Table 1: Continued.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(25)	*Chenopodium album* L.	Sarmay	Chenoppdiaceae	Herb	Leaves and young shoots are cooked as vegetable.
(26)	*Celtis australis*.	Tagha	Ulmaceae	Tree	Fruit is edible. Wood is used in furniture, for timber and as fuel.
(27)	*Cichorium intybus* Linn.	Han	Asteraceae	Herb	Leaves are used as anti-inflammatory and for hepatic complaints.
(28)	*Cedrela serrata* Royle.	Shnai	Meliaceae	Tree	Leaves are used for digestive problems, as fodder for cattle. Wood is used as fuel.
(29)	*Carthamus oxycantha* M. Bieb.	Azghibotay	Asteraceae	Herb	Leaves are used as antiseptic. Seed are used for skin itching.
(30)	*Caralluma tuberculata* N.E. Brown.	Pamankay	Asclepiadaceae	Herb	Cooked as vegetable. Juice is used for diabetes.
(31)	*Capsella bursa*—pastoris. (L.) Medic.	Bambessa	Brasssicaceae	Herb	The leaves and flowering tops are cooked as vegetables and also used as fodder for cattle. The plant is also used as salad.
(32)	*Cannabis sativa* Linn.	Bhang	Cannabinaceae	Herb	Juice of leaves is used for treating malaria and to relieve pain. Leaves are used for male impotency. Also used for flatulence and colic pain. Female plant is used in making hashish (chars).
(33)	*Cana indica* Linn.	Tasfa Botay	Cannaceae	Shurb	Cultivated as ornamental and also used for making hedges.
(34)	*Calotropis procera* (Wild) R. Brown.	Spalmai	Asclepiadaceae	Herb	Paste of leaves in oil is used as pain killer, to cure skin itch, and scabies. The root bark is used for the treatment of cholera and constipation.
(35)	*Cynodon dactylon* (L.) Pers.	Kabal	Poaceae	Herb	Grown in lawns, as fodder for grazing cattle. Crushed shoots are used as haemostatic.
(36)	*Duchesnea indica* (Andr) Folke.	Da Zmake thooth.	Rosaceae	Herb	Fruit is used as tonic, especially, as cooling agent. Fruit juice is used for eye infections.
(37)	*Dodonea viscosa* (L.) Jacq.	Ghwarhaskay	Sapindaceae	Shrub	Ash is used to treat burns and skin infections. Water extracts of leaves is used as antihelmentic. Plant is used as thatching material in building of houses. The plant is a good source of fuel for the locals.
(38)	*Diospyrus kaki* L.	Sur Amlok	Ebenaceae	Tree	Fruit is edible and also a source of income for the locals, sold locally and in other parts of the country. Leaves are used as fodder for cattle. Wood is used as fuel.
(39)	*Diospyrus lotus* L.	Tor Amlok	Ebenaceae	Tree	Fruit is edible and also used in diarrhea. Leaves are used as fodder for goat and sheep. Wood is used as fuel.
(40)	*Debregeasia saeneb* F.	Ijrhrai	Urticaceae	Tree	Wood is used as fuel.
(41)	*Delphinium roylei* Munz.	—	Ranunculaceae	Herb	Seeds are used as insecticide.
(42)	*Daphne macronata* Royle.	Lighonay	Thymeleaceae	Shrub	Leaves are used as purgative. Shoots are used as fuel.
(43)	*Euphorbia heliscopia* Linn.	Mandanrho	Euphorbiaceae	Herb	Seed are purgative. Latex is used for skin diseases and to extract spine from skin.
(44)	*Euphorbia hirta* Linn.	Jaghje	Euphorbiaceae	Herb	Seeds are used as tonic and for the treatment of diarrhea.
(45)	*Eugenia jamblana* Lam.	Jaman	Myrtaceae	Tree	Fruit is edible and used for liver problems. Bark is used as mouth wash, seed are used for diabetes, leaves are used in dysentery.
(46)	*Equisitum arvense* L.	Bandakay	Equisetaceae	Herb	Used for inflammation of urinary bladder and other urine problems.
(47)	*Eupharsia malaica* Wetts	Ghutyalay	Scrophulariaceae	Herb	Cooked as vegetable.

Table 1: Continued.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(48)	*Fummaria indica* (Hausskn) Pugsl	Krachay (Paprha)	Fumariaceae	Herb	Used as blood purifier, for pimples, and inflammation of heals and palms.
(49)	*Galium aparine* L.	—	Rubiaceae	Climber	Whole plant is used as diuretic, for urinary tract problems, and in fever.
(50)	*Gymnosporia royleana* (Wall) Lawson.	Sur Azghay	Celastraceae	Shrub	Seed are used for male impotency.
(51)	*Ficus palmata* Forssk.	Inzar	Moraceae	Tree	Fruit is edible, eaten fresh as well as dried. The tree is believed sacred and, therefore, the people avoid using it as fuel. Latex is used to extract spine from skin.
(52)	*Foeniculum vulgare* Mill.	Kaga	Apiaceae	Herb	Fruit is used as carminative, used to control vomiting, and as flavoring agent.
(53)	*Allium sativum* L.	Ogakai	Alliaceae	Herb	Eaten uncooked. Used as spice. Grinded and mixed with maize floor to prepare spicy bread.
(54)	*Heracleum candicans* Wall.ex DC.	Skhwara	Apiaceae	Herb	Used for cough and throat infections.
(55)	*Iris germanica* L.		Iridaceae	Herb	Roots are used elevate body pain. Cultivated on graves.
(56)	*Ipomoea purpurea* (Linn.) Roth.	Prewata	Convolvulaceae	Herb	Ornamental.
(57)	*Ipomoea hederacea* (L.) Jacq.	Speaker Gul	Convolvulaceae	Herb	Ornamental.
(58)	*Indigofera gerardiana* Wall. ex Baker	Ghawareja	Papilionaceae	Shrub	Leaves are used for colic pain. Woods is used as fuel. Shoots are used for making baskets and other similar articles.
(59)	*Juglan regia* Linn.	Ghuz	Juglandaceae	Tree	Fruit is edible and consumed as dry fruit. Peel of bark and roots, locally called Dandasa is used for cleaning teeth and to colour lips. Wood is used for furniture and as a timber.
(60)	*Justicia adhatoda* L.	Baikarh	Acanthaceae	Shrub	Leaves are used for cough and cold.
(61)	*Lycopus europaeus* Linn.	—	Lamiaceae		The leaves are used as antiseptics.
(62)	*Myrtus communis* L.	Asta Ghonay (Manrho)	Myrtaceae	Shrub	Fruits are edible. Leaves are used in colic and in diarrhea.
(63)	*Myrsine africana* Linn.	—	Myrsinaceae	Shrub	Leaves are used as blood purifier. Fruit is used as antihelmintic, for colic pain. Shoots are used for making hedges.
(64)	*Monotheca buxifolia* (Falc) A.DC.	Gwargurah	Sapotaceae	Shrub	Fruit is edible. Plant is also used as fuel.
(65)	*Morus lavaegata* Wallich. Ex Brandis.	Shahthooth.	Moraceae	Tree	Fruit is edible. Leaves are used as fodder for cattle.
(66)	*Morus alba* L.	Spen Thooth	Moraceae	Tree	Fruit is edible. Leaves are used as fodder for cattle. Wood is used for making furniture, for timber, for making agriculture tools and as a fuel.
(67)	*Morus nigra* L.	Tor thooth	Moraceae	Tree	Fruit is edible. Wood is used in making furniture, for timber, for making agriculture tools, and as a fuel. Leaves are used as fodder for cattle.
(68)	*Mirabilis jalapa* Linn.	Gule Badi	Nyctaginaceae	Shrub	Leaves are used to treat abscess. Root tubers are used as pain killer and also for treatment of typhoid.
(69)	*Micromeria biflora* Benth.	Shamakay	Lamiaceae	Herb	Leaves used as antiemotic. Also used in flu.
(70)	*Mentha longifolia* (Linn) Huds.	Venalay	Lamiaceae	Herb	Leaves are used to reduce gastric acidity, used as antispasmodic, carminative, and to relieve abdominal pain. Leaves are widely used to flavour local food named Gungrhi.

Table 1: Continued.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(71)	*Mentha arvensis* L.	Phodena	Lamiaceae	Herb	Leaves are used to reduce gastric acidity and also used as antispasmodic, carminative, and to relieve abdominal pain. Also used to make Chanti and as flavouring agent in a variety of food items.
(72)	*Melia azedarach* L.	Tora Bekanrha	Meliaceae	Tree	Leaves are used as antiseptic and antibiotic. Water extracts of leaves is used as antilice and antidandruff agent. Wood is used for making furniture and also for burning and for timber purposes.
(73)	*Matricaria chamomilla* Auct.	—	Asteraceae	Herb	Flowers are used as carminative, in digestive disorders, and for colic pain.
(74)	*Malva sylvestris* L.	Shonchal	Malvaceae	Herb	Cooked as vegetable.
(75)	*Morchella esculenta* Fr.	Gojay	Morchellaceae	Mushroom	Used as food. Very expensive, sold to earn. Mainly exported in dry form.
(76)	*Nerum oleander* L.	Ghanderay	Apocynaceae	Shrub	Plant is usually cultivated for ornamental purposes, leaf aqueous extract is used for skin itching.
(77)	*Nasturtium officinale* R. Br.	Talmera	Brassicaceae	Herb	Cooked as vegetable. Cooked herb is used in tetanus.
(78)	*Narcissus poeticus* L.	Gule Nargas	Amaryllidaceae	Herb	Flowers are used for ornamental purposes. Grown on graves.
(79)	*Oxalis corniculata* L.	Nainzakai Tarokai	Oxalidaceae	Herb	Eaten fresh and used as spice. Used to remove rust from metallic articles.
(80)	*Onosma hispidum* Wall.	Abai Abai	Boraginaceae	Herb	Root is used as purgative.
(81)	*Olea ferrginea* Royle.	Khona	Oleaceae	Tree	Olive oil is use externally as antiseptic and anodyne. Leaves are used in diabetes. Wood is used as fuel and for furniture. Usually cultivated in graveyards. Has become endangered species.
(82)	*Ocimum basilicum* L.	Kashmalay	Lamiaceae	Herb	Leaves are used in cough and flu. Seed are added to cold drinks. Also grown as ornament.
(83)	*Pyrus communis* L.	Nashpatai	Rosaceae	Tree	Food is edible. Fruit is source of income, sold locally and in other parts of the country. Wood is used as fuel.
(84)	*Pyrus pashia* Buch-ham ex. Don.	Batangi	Rosaceae	Tree	Fruit is edible. Wood is used as fuel.
(85)	*Punica granatum* L.	Anangori.	Punicaceae	Tree	Fruit is edible. Ash of fruit rind is used in hepatitis, digestive problems, and urinary problems.
(86)	*Populus nigra* L.	Sperdar	Salicaceae	Tree	Wood is very useful and used in making furniture, used in timber. Branches are used as fuel wood. Leaves as fodder.
(87)	*Portulaca oleracea* L.	Zangali Warkhrhay	Portulacaceae	Herb	Cooked as vegetables. Also used as demulcent.
(88)	*Portulaca quadrifida* L.	Zangali Warkhrhay	Portulacaceae	Herb	Cooked as vegetable.
(89)	*Polygonum aviculare* L.	Bandakay	Polygonaceae	Herb	Cooked as vegetable.
(90)	*Platanus orientalis* L.	Chinar	Platanaceae	Tree	Leaves are used in dysentery. Wood is used for making furniture, timber, and also as fuel. Dry leaves are also used as fuel.
(91)	*Plantago lanceolata* L.	Jabai	Plantaginaceae.	Herb	Leaves are used for treatment of dysentery and diarrhea. Also used as wound dressing and antiseptic.
(92)	*Plantago major* L.	Jabai	Plantaginaceae	Herb	Leaves are used as tonic and antiseptic, Also used for fever.

Table 1: Continued.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(93)	*Pinus roxburghii* Sargent.	Nakhtar	Pinaceae	Tree	Resin is used as antihelminitic agent. Wood is used as fuel and timber. Dried leaves locally called Barwaza are used to spread below mates in mosques. Dried leaves are also used as packing material for local fruits (apple, apricot, peach, and pyrus)
(94)	*Periploca aphylla* Decne.	Barrha	Asclepiadaceae	Shrub	Stem is used as laxative. Milky juice of shoot is used in fever.
(95)	*Papaver pavoninum* Schrenk.	Sur gulay	Papveraceae	Herb	Flowers are used as sedative.
(96)	*Quercus incana* Roxb.	Spin Banj	Fabaceae	Tree	Fruits are used for controlling excessive urination and kidney problems, also used for inflammations. Wood is used as fuel.
(97)	*Quercus dilatata* Lindl. Ex Royle.	Tor Banj	Fabaceae	Tree	Fruit is used for digestive problems and asthma. Wood is used as fuel.
(98)	*Rumex hastatus* D.Don.	Tarokay	Polygonaceae	Herb	Leaves used as carminative, diuretic, and used in jaundice. Leaves are cooked as vegetable and also eaten uncooked.
(99)	*Rumex dentatus.* L.	Shalkhay	Polygonaceae	Herb	Cooked as vegetables. Also used to treat constipation in cattle.
(100)	*Rubus fruticosus* Agg.	Karwarha	Rosaceae	Shrub	Fruit is edible. Plants are used for making hedges.
(101)	*Rosa webbiana* Wallich ex Royle	Zangali Gulab	Rosaceae	Shrub	Used for making hedges and as ornament.
(102)	*Rubus ellipticus* Smith.	Pulwarhi	Rosaceae	Shrub	Fruit is edible and is useful for removal of kidney stone. Plants are grown for making hedges.
(103)	*Salix acmophylla* L.	Walla.	Salicaceae	Tree	Leaves are used externally to relieve pain. Wood is used for furniture, timber, and as fuel.
(104)	*Robinia pseduacacia* L.	Kikar	Papilionaceae	Tree	Wood is used as fuel. Honey bee plant. Cultivated as road-side shade plant.
(105)	*Ricinus communis* L.	Arhanda	Euphorbiaceae	Tree	Seed oil is used as laxative, applied to swellings and to treat constipation. Local Hakeems use it as antidote for arsenic poisoning. Seeds are use for cough, fever, and headache.
(106)	*Rabdosia rugosa* (Wallich ex. Benth) Hara.	Spaerkay	Lamiaceae	Herb	Leaves are used in colic. Leaf extract is also used as vermicide and insecticide.
	Ranunculus muricatus L.	Ziar Gulay	Ranunculaceae	Herb	Used for treatment of schiatic pain.
(107)	*Salvia moorcroftiana*Wall. ex Benth.	Khar Kwag	Lamiaceae	Herb	Leaves are used commonly to relive pain.
(108)	*Stelaria media* (L.) Vill.	Olalai	Carophyllaceae	Herb	Plant is cooked as vegetable, also used for constipation.
(109)	*Sonchus oleraceous* L.	Shawdapai	Asteraceae	Herb	Used as fodder for cattle, believed to enhance milk production.
(110)	*Sonchus asper* L.	Shawdapai	Asteraceae	Herb	Used as fodder for cattle.
(111)	*Solanum surattense* Burm.f.	Marhaghonay	Solanaceae	Herb	Seed along with mustard oil is used for treatment of migraine. Ash of plant is used as tonic and pain killer.
(112)	*Solanum nigrum* Auct.	Kach Machu	Solanaceae	Herb	Fruit is used for inflammation and liver problems.
(113)	*Silene conidia* L.	Mangotey	Caryophyllaceae	Herb	Used as vegetables (SAAG).
(114)	*Sorghum halepense* Pers.	Dadam	Poaceae	Herb	Mature plants are used as fodder for cattle.
(115)	*Sarcococca saligna* (D.Don) Muell. Arg.	Ladanrh	Busaceae	Shrub	Plant is used for digestive disorders.
(116)	*Solanum dulcamara* L.	Kachmacho	Solanaceae	Herb	Fruit is used for inflammation and liver problems.

Table 1: Continued.

S/no.	Botanical name	Local name	Family	Habit	Ethnobotanical uses
(117)	*Silybum marianum* (L.) Gaertn.	Worajakai	Asteraceae	Herb	Flower is used for jaundice and tuberculosis.
(118)	*Salix babylonica* L.	Walla	Salicaceae	Tree	Leaves are used externally as warming agent to relieve pain. Wood is used for furniture and timber, also used as fuel.
(119)	*Sagittaria guyanensis* Kunth	—	Alismataceae	Herb	Rhizome is used in skin diseases.
(120)	*Typha angustata* Bory & Chaub.	Lukha	Typhaceae	Herb	Plant is used as thatching material. Leaves are used as fodder.
(121)	*Trifolium repens* L.	Shautal	Papilionaceae	Herb	Used as fodder for cattle. The seeds are used for treatment of pimples.
(122)	*Tribulus terrestris* L.	Markundai	Zygophyllaceae	Herb	Seed are used as general tonic, used in urinary disorders and impotency.
(123)	*Trachyspermum ammi* L.	Spairkai	Apiaceae	Herb	Fruit is used as carminative, digestive, and in colic pain.
(124)	*Thymus linearis* Benth.	Da Payo Shamakay	Lamiaceae	Herb	Leaves are used in cough, flu,and fever. Seeds are added to milk to preserve it for longer duration.
(125)	*Thuja orientalis* L.	Warha Sarwa	Cupressaceae	Shrub	Ornamental.
(126)	*Taraxacum officinale* Webber.	Ziarh Gulay	Asteraceae	Herb	Roots are used in diabetes and for kidney problems.
(127)	*Tagetes minuta* L.	Hamesha	Asteraceae	Herb	Ornamental.
(128)	*Urtica dioica* Linn.	Sezonkay	Urticaceae	Herb	Whole plant is used as diuretic, also used in jaundice.
(129)	*Verbascum Thapsus* L.	Khardag	Scrophulariaceae	Herb	Leaves are used externally to relieve pain.
(130)	*Voila Canescens* Wall.	Banafsha	Violaceae	Herb	Leaves are used in fevers, flu, and as expectorant.
(131)	*Voila biflora* L.	Banafsha	Violaceae	Herb	Leaves are used in fevers, flu, and as expectorant.
(132)	*Vitex negundo* L.	Marvandai	Lamiaceae	Shrub	Leaves are used in digestive problems. Wood is used as fuel wod.
(133)	*Withania somnifera* (L.) Dunal	Koti Lal	Solanaceae	Herb	Roots bark along with sugar is used as tonic, galactagogue. Also used to relieve back ache.
(134)	*Xanthium stramarium.* Linn.	Jishkay	Asteraceae	Woody herb	Leaves are used for treatment of asthma. Stem ash is used as pain killer. The plant is also used as fuel. Leaves are grazed by cattle.
(135)	*Zizyphus mauritiana* Lam.	Mada Bera	Rhamnaceae	Tree	Fruit is edible. Wood is used as fuel.
(136)	*Zizyphus sativa* Gaertn	Markhanry	Rhamnaceae	Tree	Fruit is edible. Leaves and fruit are believed as antibiotic and antidiabetic. Wood is used as fuel wood. Leaves are grazed by cattle.
(137)	*Zizyhus oxyphyla* Edgew	Elanai	Rhamnaceae	Tree	Fruit is edible. Leaves and fruit are believed to be antibiotic and antidiabetic. Wood is used as fuel. Root extract is used for hepatitis. Fruit is also used as heart tonic.
(138)	*Zanthoxylum armatum* DC.	Dambara	Rutaceae	Shrub	Fruit is used for treating stomach disorders and also as spices.

about local names and traditional uses of plants were obtained from local people through direct interviews. Mostly experienced and aged persons, especially elderly women were interviewed. Although interviews were made at random priority was given to the locals of upper parts of the Tehsil, due to their better knowledge of the plants and their frequent uses. Plant specimens were collected, preserved, and identified with the help of flora of Pakistan [13, 14]. Identification of plants was further confirmed through the Herbarium, Department of Botany, University of Peshawar.

3. Results and Discussion

Ethnobotany is an integral part of indigenous/local knowledge of a particular society. Different societies or communities have their own knowledge about plants and their uses [15].

In the present study a total of 140 plants were studied for ethnobotanical uses. Of these 133 (95%) plants were angiosperm, 3 (2.14%) were gymnosperms, 2 (1.42%) belonged to each of pteridophytes and fungi. Out of 133

angiosperms 76 (55.63%) were herbs 17 (12.78%) were shrubs and 40 (30.07%) were trees. The number of monocot and dicots plants were 127 (95.48%) and 6 (4.51%), respectively. Most of the plants were used for multiple purposes. Local generally used these plants for medicinal values, fuel, timber wood, foods and fodder for cattle. Out of these, 91 plants were used for medicinal purposes. The ethnobotanical information obtained are given in Table 1.

In the lower part of the Tehsil Kabal the medical facilities like government hospital, private clinics, and pharmacies are easily accessible so the use of plants for medicinal purposes is not a common feature, and they mainly use herbal drugs for colic pains and digestive problems. But the people living in the upper part of the Tehsil, especially the Qalagai, Manrhai, and Surbala villages where hospitals and other health facilities are not easily available to people, use herbal drugs quite frequently. In the present study, 93 (66.4%) plants including *Artemisia absinthium, Atropa acuminate, Ajuga parviflora, Ajuga bracteosa, Acorus calamus, Acacia modesta, Berberis lyceum, Cichorium intybus, Caralluma tuberculata, Canabis sativa, Calotropis procera, Mirabilis jalapa, Micromeria biflora, Plantago major, and Ricinus communis* are used by locals for medicinal purposes. The medicinal values of most of these plants are also reported by Razaq et al. [16], Ibrar et al. [3], Hamayun et al. [17], Manan et al. [18], and Jan et al. [19] from other parts of the country.

Majority of the people of the area are farmers and they also keep cattle, like buffalos, cows, goat, and sheep, and so forth, in homes. Milk and other dairy products are the source of food and income for most of the people living in the upper parts of the study area. To feed the cattle the local also cultivate various fodder crops. Besides these there are numerous wild plants and trees which are used as fodder for cattle. In the present study the plants that were used as fodder count 35 (25%) which include *Avena sativa, Amaranthus viridis, Capsella bursa-pastoris, Cyanodon dactylon, Sonchus asper, Trifolium repens, Sorghum halepense, Melia azedarach, Sonchus oleraceous, Morus alba, Morus nigra,* and others.

The folks, especially those living in the upper parts of the area, live a simple life. They use mainly dairy products and plants (vegetables) for food. The plants that are eaten cooked or uncooked by locals include *Silene conidia, Amaranthus viridis, Chenopodium album, Caralluma tuberculata, Allium sativum, Malva sylvestris, Nasturtium officinale, Stelaria media,* and others.

Most plants, especially trees, are cultivated in the area mainly for fuel wood. Many wild plants are used as fuel. One reason for this is that most of the people of the area are economically not strong and cannot afford LPG as fuel, which is the major alternative for the fuel wood. Plants like *Alnus nitida, Artemisia scoparaia, Accacia nilotica, Acacia modesta, Celtis australis, Dodonea viscosa, Melia azedarach,* and *Alianthus altissima* are used as fuel wood by locals. The information gathered in the present study is in line with the works of Ibrar et al. [3], Zabihullah et al. [12], and Khan et al. [20].

The use of plants is an important part in construction of local mud houses and also in making furniture. *Alnus nitida, Alianthus altissima, Juglan regia, Morus nigra, Morus alba, Melia azedarach,* and others are locally used as timber and for making furniture. Plants like *Artemisia scoparaia* and *Dodonea viscosa* are used as thatching material in construction of muddy houses.

The preset study reveals that the investigated area is under great biotic pressure in the form of deforestation and overgrazing. Woody plants have been damaged due to poor management. There is a dire need to conserve the resources of the area for sustainable use by the locals. The area has a rich potential for wildlife and medicinal plants, and as rangeland, but ecological management including protection is required so that future generation are made happy with natural resources.

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