

## CHECKLIST OF SOME MEDICINAL PLANT OF DISTRICT LOWER DIR, PAKISTAN

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### ABSTRACT

District Lower Dir has diverse flora of medicinal plants. 65 medicinal plant species were collected, distributed in 42 families and 60 genera. Among these 17 species were monocots (26.98%), 46 were Dicots (73.02 %) while 2 species of Gymnosperm. Local inhabitants use these plants for various medicinal purposes. Common uses include remedies for Abdominal Pain, Diarrhea, Dysentery, Diuretic, Blood Purifier, Refrigerant and Tonic, Antispasmodic, Narcotic, sexual desire, Wounds skin diseases and Kidney stones. Anthropogenic activities, grazing and environmental changes reducing numbers of these medicinal plants.

**KEYWORDS:** DIR; Khas; Village; Medicinal; North Purifier

### INTRODUCTION

The district Lower Dir is located between 34°-37' to 35°-07' North Latitudes and 71°-31' to 72°-14' East longitudes [1]. This region is connected on the north with Upper Dir, and Swat on east, in the South borders with Malak and District, while Afghanistan and Bajour agency lies on west side [2]. On 13 August 1996 District Dir was bifurcate in two separate state i.e., district upper Dir and district Lower Dir [3]. The district is divided into two main subdivisions; Samar Bagh and Timergara. The District consists of seven Tehsils i.e. Balambat, Adenzai, Lal Qilla, Munda, Khall, Samar Bagh and Timergara [2].

The plants which have active bio chemicals ingredient and having some response in the curing of disorders in living organisms are known as medicinal plants [4]. Pakistan has a diverse flora having about 6000 species of Flowering Plants. About 700 plant species are used for medicinal and aromatic purposes [5]. In Pakistan 80% of the people belonging to the rural areas still depends upon the herbal medicines [6]. In the recent years, more efforts have been made to document the traditional knowledge. In this regard traditional utilization of 160 plants have been described, collecting the knowledge form Margalla Hills National Park. The conservation status has also been discussed [7]. The herbal medicines occupy distinct position right from the primitive period to present day.

The Ethomedicinal history of Plant is as old as man himself. In Indo-Pak first record of medicinal plant was compiled in Rig Veda between 4500-1600 BC and Ayurveda between 2500-600 BC. This system goes back to Greeks; the traditional knowledge was adopted by Arabs and then extends to Europe, India and other parts of world. Approximately 80% peoples of the world mainly depend on the habitual system of health care [8]. These medicines can be obtain easily from the nature and have little side effects. Pakistani people basically prefer Unani system but the ethno medicinal plants use is also seen in the remote areas. [9]. In the developing countries, especially in those areas which have insufficient or

low approach to modern health services or medicines, medicinal plants are use by local peoples [10]. Medicinal plants belong to group of those plants that contain distinctive chemical compound in their body and are applied for diverse purposes.

Due to the unavailability of allopathic doctors and modern medicine in the remote areas and up to some extant a fears of side effects of modern medicine local people prefer traditional systems [11]. The people of this remote area also have no alternatives besides following the old tradition since there was no doctor or Hakims. Therefore, the objective of the study was to document plants of this remote area which are used as medicine by the local peoples.

## MATERIALS AND METHODS

The research study was conducted during spring and summer 2016 in the district lower Dir. Field trips were arranged for collection of plants, after collection plants were poisoned and preserved for identification. They were identified with the help of available literature (Nasir & Ali 1971-95). The information about the Ethnobotanical uses of the plants was obtained from the stake holder of the area through questionnaire. The outcome of the results were rechecked and compared with literature like that of Ali (1998), Ali & Fefevre (1996) and Khalid (1995). The data was analyzed and indigenous knowledge was documented.

## REVIEW OF TRADITIONAL KNOWLEDGE

Questionnaire survey was uses for the documentation of indigenous knowledge. Question were asked from local people knowledgeable persons specially Hakims, who were the main user of medicinal plants. About 100 informants were interviewed randomly. The indigenous medicinal plants having traditional knowledge of utilization among the people were been selected. The knowledge obtain from local people was also check with other literature.

## RESULTS AND DISCUSSION

In total 65 Plants species were collected from study areas which are used for various medicinal purposes. Collected Plant species are distributed in 42 families and 60 Genera. Out of 65 species 17 species were monocots, 46 species are dicots while remaining 2 species are gymnosperms. Habitat wise 33 plants are herb, 20 are Shrubs while remaining 9 plants Trees and one climber. All these plants are wild and available freely in nature and these plants are using by local peoples from many centuries. *Achyranthus aspera*, *Allium cepa*, *Citrus medica*, *Ocimum basilicum*, *Bergenia cilata*, used for dissolving kidney stone, while the remaining plants are used for various medicinal purposes such as Abdominal Pain (10.76%), Diarrhea (6.15%), Dysentery (7.69%), Diuretic (7.69%), Blood Purifier, Refrigerant and Tonic (13.85%), Antispasmodic (7.69%), narcotic (6.45%), sexual desire (4.61%), Wounds and skin diseases (12.30%), stomach(6.15%). We consider this is a short checklist of medicinal plant but it may be helpful to other researchers which are interested in Pharmaceutical study. Complete descriptions of plants are given below in Table 1.

## CONCLUSION

The study suggests that residents of mountainous and rural areas frequently used these Plants. Knowledge wise older people have more awareness about these plants. Mostly of the plant taxa were commonly practiced against different diseases like blood purifier, diabetes, antispasmodic, skin problems, and Diuretic, dysentery, narcotic, sexual desire and general tonics. Keeping in view their sustainability of these taxa may be utilized for new drugs and commercial purpose.

Table 1: Medicinal Plants of District Lower DIR Pakistan

S.No	Botanical Name	Local Name	Family	Part Used	Habit
1	<i>Acacia modesta</i> Wall.	Palusa	Mimosaceae	Gum	Tree
2	<i>Achyranthus aspera</i> L	Geshy	Amaranthaceae	Entire plant	Herb
3	<i>Ajuga bracteosa</i> Wall.Ex Bth.	Gooti	Lamiaceae	Whole Parts	Herb
4	<i>Allium cepa</i> L.	Peyaz	Liliaceae	Leaves, juice	Herb
5	<i>Amaranthus viridis</i> L.	Ganhar	Amaranthaceae	complete Plant	Herb
6	<i>Ammi visnaga</i> Lamk.	Spairkai	Apiaceae	Fruit	Herb
7	<i>Artemisia maritime</i> Linn.	Tharkha	Asteraceae	Entire plant	Shrub
8	<i>Avena sativa</i> L.	Jawdar	Poaceae	Seed	Herb
9	<i>Brassica campestris</i> L.	Sharsham	Brassicaceae	Leaves, Seed	Herb
10	<i>Berberis lycium</i> Royle.	Kwary	Berberidaceae	Rhizome, Fruit	Shrub
11	<i>Berberis vulgaris</i> L.	Kwary	Berberidaceae	Rhizome, Fruit	Shrub
12	<i>Bergenia ciliata</i> (Haw.)Sternb.	Kamar Panra	Saxifragaceae	Leaf	Herb
13	<i>Calotropis procerea</i> L.	Spulmai	Asclepidiaceae	Latex and Root	Shrub
14	<i>Carthamus oxycantha</i> Bieb.	Kareeza,	Asteraceae	dehydrated fruits	Herb
15	<i>Cedrus deodara</i> (Roxb. ex D. Don)	Diyar	Pinaceae	Resins	Tree
16	<i>Chenopodium album</i> Linn.	Sarmay	Chenopodiaceae	Entire plant	Herb
17	<i>Citrus medica</i> L.	Lambo	Rutaceae	Fruit	Tree
18	<i>Colchicum luteum</i> Baker.	suranjan	Liliaceae	Dried corms	Herb
19	<i>Coriandrium sativum</i> L.	Dania	Apiaceae	Leaves, Fruit	Herb
20	<i>Cynodon Dactylon</i> L.	Kabal	Poaceae	Whole plant	Herb
21	<i>Daphne mucronata</i> Royle	Laighonai	Thymelaeaceae	Fruit	Shrub
22	<i>Datura innoxia</i> Mill	Baturra	Solanaceae	Flower, leaves and seeds	Shrub
23	<i>Datura stramonium</i> L.	Baturra	Solanaceae	Flower, leaves,	Shrub
24	<i>Debregeasia saeneb</i> F.	Kharwala	Urticaceae	Fruits,leaves	Tree
25	<i>Dodonea viscosa</i> L.	Ghurasky	Sapindaceae	Bark, leaves, seed	Shrub
26	<i>Eruca sativa</i> Mill.	Jmama	Brassicaceae	Complete plant	Herb
27	<i>Eucalyptus camaldulensis</i> Deh.	Lachi	Myrtaceae	Fruits and leaves	Tree
28	<i>Euphorbia helioscopia</i> L.	Mandaro	Euphorbiaceae	Juice of leaves, Roots	Herb
29	<i>Ficus carica</i> L.	Inzar	Moraceae	Latex, Fruit	Tree
30	<i>Foeniculum vulgare</i> Mill.	Kaga	Apiaceae	Leaves, fruits	Herb
31	<i>Fumaria indica</i> Hausskn.	Shatara	Fumariaceae	Entire plant	Herb
32	<i>Geranium wallichianum</i> D.Don ex Sweet.	Sor booti	Geraniaceae	Rhizome	Herb
33	<i>Hedera nepalensis</i> K.Koch.	Parvatha	Hederraceae	Fruit and Leaf	Herb
34	<i>Indigofera articulate</i> Gouan (L).	Ghwareja	Papilionaceae	Seed, Leaves Root	Shrub
35	<i>Isodon rugosus</i> (Wall. Ex Bth.) Codd.	Krachi	Lamiaceae	Leaves and Branches	Shrub
36	<i>Juglans regia</i> Linn.	Ghooz	Juglandaceae	Bark, Fruit and leaves	Tree
37	<i>Justicia adhatoda</i> L.	Baikand	Acanthaceae	Leaves	Shrub
38	<i>Melia azedarach</i> L.	Thora shandai	Meliaceae	Fruit, leaves and seed	Tree
39	<i>Mentha arvensis</i> L.	Podina	Lamiaceae	Entire Plant	Herb
40	<i>Mentha longifolia</i> L.	Velany	Lamiaceae	Entire Plant	Herb
41	<i>Micromeria biflora</i> Benth.	Kashmalai	Lamiaceae	Vegetative parts	Shrub
42	<i>Mrythus communis</i> L.	Maroo	Myrtaceae	Fruit	Herb
43	<i>Nerium odorum</i> Soland.	Ganderi	Apocynaceae	Bark and root	Shrub
44	<i>Ocimum basilicum</i> L.	Kasmali	Lamiaceae	Complete Plant	Herb

S.No	Botanical Name	Local Name	Family	Part Used	Habit
45	<i>Olea ferruginea</i> Royle.	Khona	Oleaceae	Leaves, Bark, Fruit	Tree
46	<i>Otostegia limbata</i> Boiss.	Pishkand	Lamiaceae	Leaves	Herb
47	<i>Oxalis corniculata</i> L.	Threwaky	Oxalidaceae	Entire Plant	Herb
48	<i>Papaver somniferum</i> L.	Doda, kash kash	Papaveraceae	Seeds, latex	Herb
49	<i>Pinus roxburghii</i> Serg	Nakhtar	Pinaceae	Resin	Tree
50	<i>Plantago lanceolata</i> L.	GhwaJabai	Plantaginaceae	Seeds and leaves	Herb
51	<i>Platanus orientalis</i> L.	Chinar	Plantanaceae	Leaves and Bark	Tree
52	<i>Podophyllum emodi</i> Wall.	Kakora	Phodophyllaceae	Root, Rhizome	Herb
53	<i>Punica granatum</i> Linn.	Anangori	Punicaceae	Fruit and root	Shrub
54	<i>Quercus incana</i> Roxb.	Serray	Fagaceae	Leaves, Bark, Seed	Tree
55	<i>Ricinus communis</i> L.	Aranda	Euphorbiaceae	Seed, Leaves	Shrub
56	<i>Rubus anatolicus</i> L.	Karwara	Rosaceae	Fruit	Shrub
57	<i>Sarcococca saligna</i> (D.Don)	Shinwala	Buxaceae	Entire plant	Herb
58	<i>Solanum nigrum</i> Bernex	Karmacho	Solanaceae	Entire Plant	Herb
59	<i>Thymus linearis</i> Benth.	Spairkai	Lamiaceae	Fruit	Herb
60	<i>Verbascum thapsus</i> L.	Khardug	Scrophulariaceae	Flower, Leaves	Herb
61	<i>Viola serpens</i> wall.	Binowsa	Violaceae	Leaves, Flower	Herb
62	<i>Vitis vinifera</i> L.	Angoor	Vitaceae	Leaves, fruits	Climber
63	<i>Xanthium strumarium</i> L.	Geeshy	Asteraceae	Complete Plant	Herb
64	<i>Zizyphus sativa</i> Gaethn	Markhani	Rhamnaceae	Fruit, Bark leaves	Shrub
65	<i>Zanthoxylum armatum</i> DC.	Dambara	Rutaceae	Seed, bark, fruit	Shrub

Table 2: Plants Used For Abdominal Pain and Infection

Botanical Name	Local Name	Family
<i>Achyranthus aspera</i> L	Geshy	Amaranthaceae
<i>Ajuga bracteosa</i> Wall.Ex Bth.	Gooti	Lamiaceae
<i>Debregeasia saeneb</i> F.	Kharwala	Urticaceae
<i>Foeniculum vulgare</i> Mill.	Kaga	Apiaceae
<i>Hedera nepalensis</i> K.Koch.	Parvatha	Hederraceae
<i>Papaver somniferum</i> L.	Doda, kash kash	Papaveraceae
<i>Thymus linearis</i> Benth.	Spairkai	Lamiaceae

Table 3: Plant used for Diarrhea

Botanical Name	Local Name	Family
<i>Justicia adhatoda</i> L.	Baikand	Acanthaceae
<i>Papaver somniferum</i> L.	Doda, kash kash	Papaveraceae
<i>Punica granatum</i> Linn.	Anangori	Punicaceae
<i>Solanum nigrum</i> Bernex	Karmacho	Solanaceae

Table 4: Plant used for Dysentery

Botanical Name	Local Name	Family
<i>Achyranthus aspera</i> L	Geshy	Amaranthaceae
<i>Artemisia maritime</i> Linn.	Tharkha	Asteraceae
<i>Papaver somniferum</i> L.	Doda, kash kash	Papaveraceae
<i>Punica granatum</i> Linn.	Anangori	Punicaceae
<i>Quercus incana</i> Roxb.	Serray	Fagaceae

**Table 5: Plant used for Diuretic**

Botanical Name	Local Name	Family
<i>Achyranthus aspera</i> L.	Geshy	Amaranthaceae
<i>Ajuga bracteosa</i> Wall.Ex Bth.	Gooti	Lamiaceae
<i>Hedera nepalensis</i> K.Koch.	Parvatha	Hederraceae
<i>Mentha arvensis</i> L.	Podina	Lamiaceae
<i>Ocimum basilicum</i> L.	Kasmali	Lamiaceae

**Table 6: Plant used for Blood Purifier, Refrigerant and Tonic**

Botanical Name	Local Name	Family
<i>Acacia modesta</i> Wall.	Palusa	Mimosaceae
<i>Artemisia maritime</i> Linn.	Tharkha	Asteraceae
<i>Fumaria indica</i> Hausskn.	Shatara	Funariaceae
<i>Indigofera articulate</i> Gouan (L).	Ghwareja	Papilionaceae
<i>Juglans regia</i> Linn.	Ghooz	Juglandaceae
<i>Sarcococca saligna</i> (D.Don)	Shinwala	Buxaceae
<i>Viola serpens</i> wall.	Binowsa	Violaceae
<i>Zanthoxylum armatum</i> DC.	Dambara	Rutaceae
<i>Zizyphus sativa</i> Gaethn	Markhani	Rhammaceae

**Table 7: Plant used as Antispasmodic**

Botanical Name	Local Name	Family
<i>Datura stramonium</i> L.	Baturra	Solanaceae
<i>Juglans regia</i> Linn.	Ghooz	Juglandaceae
<i>Mentha arvensis</i> L.	Podina	Lamiaceae
<i>Solanum nigrum</i> Bernex	Karmacho	Solanaceae
<i>Thymus linearis</i> Benth.	Spairkai	Lamiaceae

**Table 8: Plant used for stomach**

Botanical Name	Local Name	Family
<i>Oxalis corniculata</i> L.	Threwaky	Oxalidaceae
<i>Vitis vinifera</i> L.	Angoor	Vitaceae
<i>Berberis lycium</i> L.	Kwary	Berberidaceae

**Table 9: Plant Used as Sexual Desire**

Botanical Name	Local Name	Family
<i>Rubus anatolicus</i> L.	Karwara	Rosaceae
<i>Allium cepa</i> L.	Peyaz	Liliaceae
<i>Pinus rouxburgii</i> Sarg	Nakhtar	Pinaceae

**Table 10: Plant Used As a Narcotic**

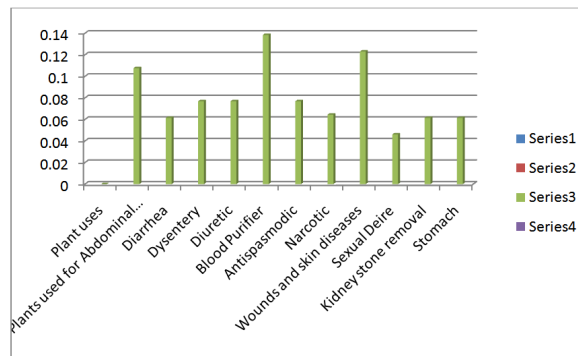
Botanical Name	Local Name	Family
<i>Cannabis sativa</i> L.	Bhang	Cannabiaceae
<i>Papaver somniferum</i> L.	kash kash	Papaveraceae

**Table 11: Plant used for Wounds and Skin**

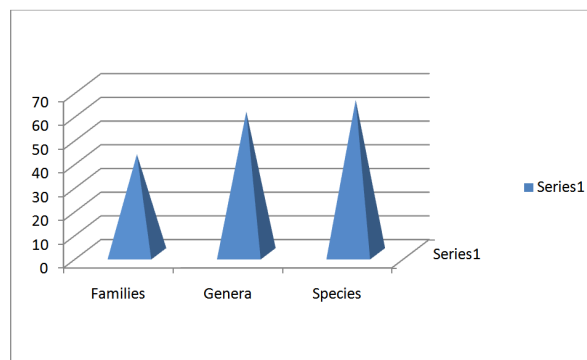
Botanical Name	Local Name	Family
<i>Ammi visnaga</i> Lamk.	Spairkai	Apiaceae
<i>Berberis lycium</i> Royle.	Kwary	Berberidaceae
<i>Calotropis procerea</i> L.	Spulmai	Asclepidiaceae
<i>Debregeasia saeneb</i> F.	Kharwala	Urticaceae
<i>Dodonea viscosa</i> L.	Ghurasky	Sapindaceae
<i>Justicia adhatoda</i> L.	Baikand	Acanthaceae
<i>Quercus incana</i> Roxb.	Serray	Fagaceae
<i>Viola serpens</i> wall.	Binowsa	Violaceae

**Table 12: Plant Used For Removal of Kidney Stone**

Botanical Name	Local Name	Family
<i>Achyranthus aspera</i> L	Geshy	Amaranthaceae
<i>Allium cepa</i> L.	Peyaz	Liliaceae
<i>Citrus medica</i> L.	Lambo	Rutaceae
<i>Ocimum basilicum</i> L.	Kasmali	Lamiaceae
<i>Bergenia ciliata</i> (Haw.) Sternb.	Kamar paanah	Saxifragaceae



**Figure 1: Graphically Presentation of Different Uses of Plants**



**Figure 2: Graphically Presentation of Families, Genera and Species of Plants**

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