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FIRST FLORISTIC EXPLORATION OF THE DISTRICT TORGHAR, KHYBER PAKHTUNKHWA, PAKISTAN

AZHAR MEHMOOD[1,2], SHUJAUL MULK KHAN[3*], AZHAR HUSSAIN SHAH[1], ABBAS HUSSAIN SHAH[2] AND HABIB AHMAD[4]

[1]*Department of Botany, Hazara University Mansehra Pakistan*
[2]*Department of Botany GPGC Mandian Abbottabad Pakistan*
[3]*Department of Plant Sciences, Quaid-i-Azam University Islamabad*
[4]*Department of Genetics, Hazara University Mansehra Pakistan*
[*]*Corresponding author's e-mail address: shuja60@gmail.com*

Abstract

District Tor Ghar lies on the western most edge of the Himalayas Range of Mountains. Plant scientists have explored most parts of Pakistan but still certain regions including Tor Ghar are un-explored. Thus it is imperative to introduce region in floristic terms for the first time. The study was initiated to not only provide first inventory of vascular plants but also to evaluate floristic diversity of the region. The research area was extensively visited during flowering and fruiting seasons of plants during the summers of 2012 and 2013. Plants were collected from various localities, voucher numbers were given to specimens and other relevant data pertaining to locality i.e., habitat, habit, family, scientific and local names were recorded for each species. Mounted copy of each voucher specimens were deposited to the Herbarium of Hazara University Mansehra. Results of this study were arranged according to Benthum & Hooker (1862-1883) system of classification. This first exploration revealed a total of 331 vascular plant species belonging to 246 genera and 101 families. These include 12 species of Pteridophytes, 6 gymnosperms and 313 Angiosperms. The dicotyledons were represented by 79 families, 197 genera and 267 species, while monocotyledons by 14 families, 38 genera and 46 species. Families Asteraceae and Leguminosae were the richest families with 25 & 24 species followed by Poaceae (21 species), Lamiaceae (17 species) and Rosaceae (14 species). Families Ranunculaceae and Brasicaceae were represented by 10 species and Euphorbiaceae had 9 species. Moraceae, Apiaceae and Polygonaceae each had 8 species. Remaining families either included 7 or less than 7 species. It is believed that this very first check list of vascular plants of Tor Ghar District is a comprehensive picture of floristic diversity and will serve as a base line for future studies. This exploration is a part of an ongoing project in which we will explore plant communities and ecological as well as anthropogenic gradients of the regional flora in near future.

Keywords: Floristic Exploration, Diversity, Vascular Plant, Torghar,

Introduction

Plants are imperative for the continuation of ecosystem services that is water, air and fertile soil. In spite of great importance, out of approximately 30 million living species only 1.75 million living species of the world have been described so far (Hawksworth & Arroyo, 1995). A large number of species are yet to be explored by biologists. The knowledge of floristic composition is essential to understand the ecosystem of the area. Plant check list is usually the only source of botanical information of the area and may serve as a useful starting point for detailed study (Keith, 1988). Floristic listing helps in identification and nomenclature of species (Ilyas *et al.,* 2013). To develop conservation strategies and estimate the changes taking place in the vegetation patterns of any area, it is required to have a detailed floristic account of that area based on collections and correct identification (Manikandan & Lakshminarasimhan, 2012, Khan *et al.,* 2013a, Khan & Ahmad 2014).

Pakistan has an important geographical position with rich floral diversity. More than 6000 vascular plants have been reported in the region (Stewart, 1972). About 80% of the endemic flowering plants of Pakistan are restricted to the northern and western mountains (Ali & Qaiser, 1986). Various floristic studies are reported from Pakistan and contributed in the local flora, Such as Parker (1956), Stewart (1972), Bhatti *et al*., (1998-2001), Shah & Khan (2006), Qureshi (2008), Zaheer & Sardar, (2008), Haq *et al.,* (2010), Fazal *et al.,* (2010), Qureshi & Bhatti, (2010), Saeed *et al.,* (2012), Waris *et al*., (2013), Khan *et al.,* (2013b), Ilyas *et al.,* (2013), Shaheen *et al.,* (2011), Shaheen *et al.,* (2012), Tanvir *et al.,* (2014) and Zulfiqar *et al.,* (2015). The Himalaya is one of the mountain range where most of the natural forest resources of Pakistan lie. Tor Ghar district is one of the unexplored areas situated at the western edge of the lesser Himalayas at the bank of Indus (Hazara division, Khyber Pakhtunkhwa province of Pakistan) (Fig. 1). It is a rugged mountainous region, shares its borders with Tanawal on south, Agror, Tikuari and Nandiar on the east, Indus river and Thakot on north and District Buner to the west. The only road transverse Tor Ghar from Darband to thakot is 85Km. Floristically, it is part of the Western Himalayan Province of Irano-Turanian Region (Takhtadzhian & Cronquist, 1986). It can be located on 34º 32' - 34º 50' N, and 72º 48' - 72º58' E. The altitude of District ranges from 450masl to 3,000masl. High altitude is covered with blue pine forests which are described as Himalyan moist temperate and are the best habitats of wild birds and animals. These forests are owned by the people of the area most of whom are not aware about the importance of these forest resources. These forests are dominated by Kail, Fir and Spruce trees (Fig. 2). Legal and illegal cuttings had badly destroyed these forests. Management of forest resources is needed to save this treasure of nature. Soil erosion and landslides are common due to steep slopes and degradation of vegetation by deforestation and overgrazing. Climate of the area is subtropical in lower region which change to

moist temperate and sub alpine type at upper elevations. There is no metrological observatory in the Tor Ghar, therefore, climatic data was obtained from nearest station situated in Oghi on the eastern boundary of study area. Total annual rain fall was 980 mm during the year 2013. The maximum rain fall occurs during early spring and early autumn especially in the month of February. Climate of Tor Ghar is pleasant in spring and autumn but winter remains very harsh due to heavy snow fall. The snow fall occurs generally between December and February each year. Tor Ghar is one of the most neglected and deprived region of Khyber Pakhtunkhwa province where people lack basic needs of life. Tor Ghar has been given a status of 25th District of Khyber Pakhtunkhwa on 28 January, 2011 by Federal Government. The district is administratively divided into two Tehsils; Judbah and Kandar and one Sub tehsil Karor Madakhel. Despite its status as a District, Tor Ghar has a predominant tribal system and traditions. People of the area are mostly illiterate and not aware of loss of biodiversity and its impact on human life. They are using natural resources ruthlessly. They use live stocks for milk, meat, transportation and farming. Seasonal nomads with large number of cattle's also stay in this area. The large numbers of live stocks result in the overgrazing of natural vegetation.

Although Botanists have visited most parts of the Pakistan but some areas of the country including study area (District Tor Ghar) were still unexplored till this study. No previous data exist about the vegetation of area and hence it is important to document its flora. Number of social, administrative and communication problems were main hurdles in such studies. Keeping the utmost importance of first ever exploration present study was planned with the objectives to explore, identify and document vascular plant species to provide scientific basis for future research.

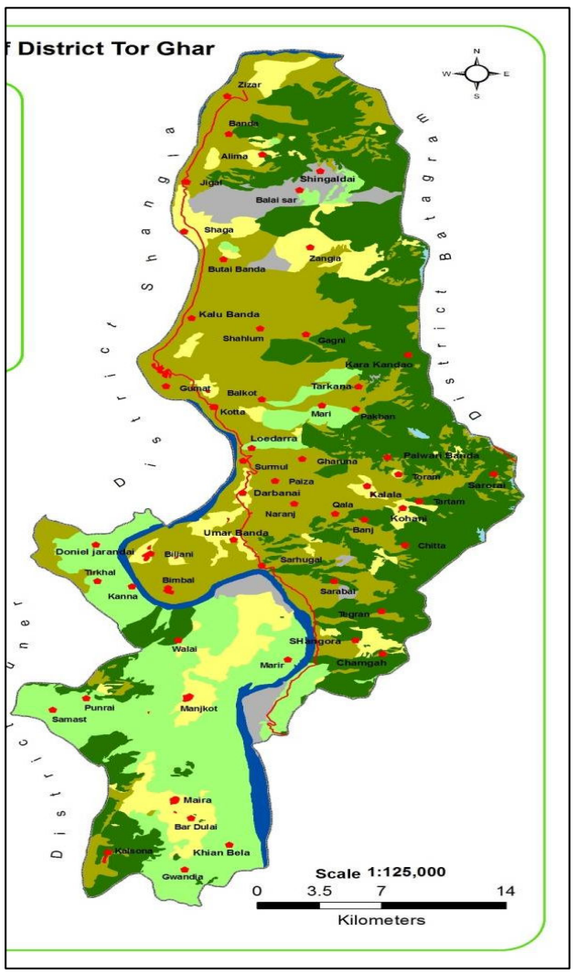

Fig. 1. Forest map of District Tor Ghar.

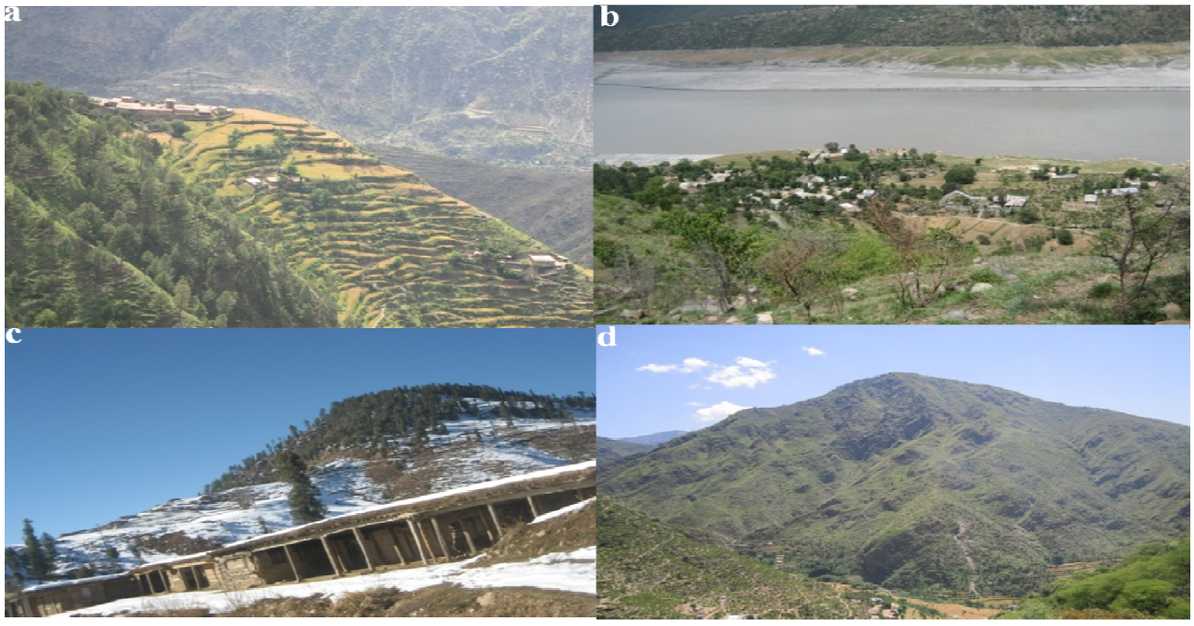

Fig. 2. Scenic view of district Tor Ghar; a) Village Soral , b) River Valley near Judbah, c) Machae Sar, Highest peak of the district d) Sub tropical region of Nusrat Khel

Materials and Methods

The research area was extensively visited during the summers of 2012 and 2013 while most of the vascular plants were in flowering and fruiting stage. Plants were collected from various localities of the district and specimens were given voucher numbers. Other relevant data pertaining to locality, habitat, habit, family, scientific, local/common names were also recorded. The plant specimens were poisoned with naphthalene powder and pressed in newspaper/blotting papers and dried. The poisoned specimens were mounted in triplicate on standard herbarium sheets (standard size 11.5 inches x 16.5 inches). All the field information was shifted to the herbarium sheets. The plants were identified with the help of local and regional flora (Stewart 1972, Nasir & Ali 1970-1989, Ali & Qaiser 1995-2015. Some pictures were selected from the photographs of the specimen taken in research area. The identities of the plants were confirmed by comparing with specimen deposited in the Herbarium of Hazara University. After identification mounted copy of each voucher specimen was deposited in the herbarium of Hazara University Mansehra. Data obtained from extensive field work in District Tor Ghar was used to prepare a complete floristic list of plant species along with families. All plants names were family wise alphabetically arranged and are presented in the result.

Results

During this study total of 331 vascular plant species belonging to 246 genera and 101 families were recorded (Table 1). It includes 12 species of Pteridophytes and 6 gymnosperms. Angiospermic flora consists of 313 species belonging to 93 families. The dicotyledons are represented by 79 families, 197 genera and 267 species, while monocotyledons by 14 families, 38 genera and 46 species. The Pteridophytes constitutes 3.61%, Gymnosperms 1.80% and Angiosperms 94.57% (Monocots 13.89% and Dicots 80.66%) of the total collected species (Fig. 3). The highest number of species were recorded of family Asteraceae (25 species, 7.53%) followed by Leguminosae (24 species, 7.22%), Poaceae (21 species, 6.32%), Lamiaceae (17 species, 5.12%) and Rosaceae (14 species, 4.21%). Ranunculaceae and Brasicaceae each had (10 species, 3.01%) and Euphorbiaceae (9 species, 2.71%) Moraceae, Apiaceae and Polygonaceae each had (8 species, 2.40%). All these 11 larger families collectively contributed 46.22% of total species. Remaining families either included 7 or less than 7 species (Fig. 4)

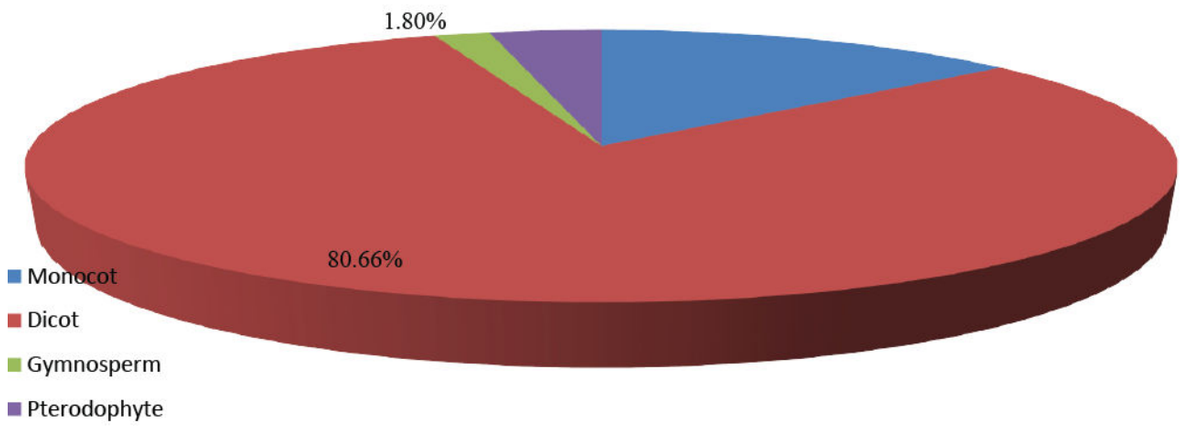

Fig. 3. Percentage of vascular Plants in District Tor Ghar

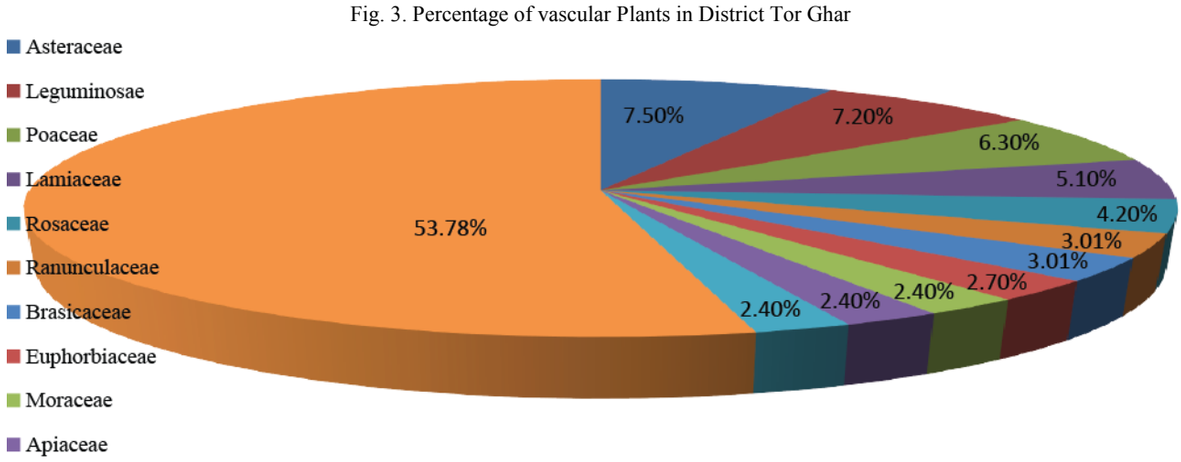

Fig. 4. Percentage of different plant families in District Tor Ghar

Table 1. Inventory of Vascular plants collected during first exploration of District Torghar.

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
	Pteridophytes							
1	**Adiantaceae**	1	*Adiantum caudatum* Linnaeus		Herb	_____	Soral	1200
		2	*Adiantum incisum* Forssk.	Sumbel	Herb	_____	Soral	1300
		3	*Adiantum venustum* D. Don.	Babozai	Herb	_____	Soral	1200
		4	*Adiantum capillus - veneris* Linn.	Sumbel	Herb	_____	Haleema	1400
2	**Aspleniaceae**	5	*Asplenium septentrionale* (Linnaeus) Hoffmann,	Wakha rangaey	Herb	_____	Haleema	2000
3	**Dryoteridaceae**	6	*Polystichum lonchitis* L		Herb	_____	Shagae	800
		7	*Polystichum munitum* (Kaulf.) C.Presl		Herb		Shagae	800
		8	*Polystichum squarrosum* (D. Don) Fée,		Herb		Behrhi	1800
		9	*Polystichum tsussimense* (Hook.) J.Sm.		Herb		Behrhi	1800
4	**Equisetaceae**	10	*Equisetum ramosissimum* Desf.	Bandakay	Herb		Kotkay	800
5	**Pteridaceae**	11	*Pteris cretica* Linnaeus,	Qinchi panra	Herb	_____	Soral	1200
6	**Sinopteridaceae**	12	*Onychium contiguum* Wall. Ex Hope		Herb		Soral	1200
	Dicotyledons							
7	**Acanthaceae**	13	*Barleria cristata* L.	Tadrelu	Herb	June- August	Kunhar	800
		14	*Dicliptera bupleuroides* Nees.		Herb	April-june	Kandar	800
		15	*Justicia adhatoda* L.	Baikar	Shrub	May-July	Kotkay	700
8	**Amaranthaceae**	16	*Achyranthes bidentata* Blume	Geshay/ Spay boty	Herb	Nov –Jan	Kotkay	1800
		17	*Achyranthus aspera* L.	Puth Kanda	Herb	March-May	Kotkay	1800
		18	*Aerva javanica (*Burm.f) Juss.	Spin booti	Herb	April-June	Dadam	500
		19	*Aerva sanguinolenta* (Linn.) Blume	Spin Botee	Herb	March-June	Kunhar	700
		20	*Amaranthus caudatus* Linn.	Chaleray	Herb	June-August	Judbah	700
		21	*Amaranthus spinesus* L.	Karsusa	Herb	May-Agust	Judbah	700
		22	*Amaranthus viridis* Linn.	Ganhar	Herb	April-June	Kalash	1400
9	**Anacardiaceae**	23	*Pistacia integerrima* J.L.Stewart. Brandis	Shanae	Tree	April –June	Kotkay	1500
		24	*Cotinus coggyria* Scop.	Chamy-arlakhta / Paan	Shrub	March-May	Soral	1200
10	**Apiaceae (Umbelifererae)**	25	*Aethusa cynapium* L.		Herb	March-May	Soral	1000
		26	*Bupleurum falcatum* L.		Herb	May-August	Shatal	2000
		27	*Eryngium Sp.*L.		Herb	May-July	Dadam	1000
		28	*Foeniculum vulgare* Mill.	Sounf	Herb	April-June	Shatal	1600
		29	*Oenanthe crocata* L		Herb	March-May	Bartuni	2300
		30	*Oenanthe javanica* (Bllume) DC.		Herb	March-May	Bartuni	2300
		31	*Scandix pectin-veneris* L.		Herb	March-May	Bartuni	2000
		32	*Torilis leptophylla* (L.) Reichb		Herb	March –May	Kotkay	600
11	**Apocynaceae**	33	*Nerium indicum* Mill.	Gandirey	Shrub	May-July	Maira	800
		34	*Nerium oleander* L.	Kaneer	Shrub	March-August	Maira	900
		35	*Carissa opaca* Stapf. en Haines	Granda	Shrub		Kotkay	700
12	**Aquifoliaceae**	36	*Ilex dipyrena* Wall		Tree	April-June	Machasar	3000
13	**Araliaceae**	37	*Hedra nepalensis* K.Koch.	Parweta	shrub	June-August	Gantharh	2600
14	**Asclepiadaceae**	38	*Calotropis procera* (Ait.) Ait. F	Spulmay	Shrub	Jan-December	Darbani	800

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		39	*Caralluma tuberculata* N.E. Brown	choung	Herb	June-July	Machra Akazai	800
		40	*Periploca aphylla* Dcne.	Bata/Barara	Herb	March-May	Darbani	700
15	**Asteraceae (Compositae)**	41	*Achillea millifolium* L.	Karkarah	Herb	April-June	Soral	1000
		42	*Artemisia absinthium* L	Tarkha	Herb	April-August	Kandar	800
		43	*Artemisia scoparia* Waldst. & Kit.	Gandi booti/ Jaokae	Herb	April-July	Kandar	900
		44	*Artemisia vulgaris* L.	Joakay	Herb	April-June	Haleema	1500
		45	*Calendula arvensis* L.	Ziar Guley	Herb	April-July	Maira	710
		46	*Carthmus oxycantha* M.Bieb.	Kareza	Herb	April-July	Asharay	1150
		47	*Centaurea iberica* Trevir & Spreng		Herb	May-July	Dadam	800
		48	*Chamaemelum nobile* (L.) All.		Herb	June-July	Machasar	2500
		49	*Cichorium intybus* L.	Hanshamakey/ Kasny	Herb	April-June	Shagai	800
		50	*Circium falconeri* (Hook. F) Petr.		Herb		Dada banda	1200
		51	*Cirsium arvense* (L.) Scop.		Herb	May-August	Soral	1250
		52	*Conyza canadensis* (L.) Corgn.	Maloocheii	Herb	April-June	Balkot	1000
		53	*Galinsoga parviflora* Cavanilles		Herb	March- May	Balkot	1000
		54	*Lactuca serriola* L.		Herb		Shadak	730
		55	*Parthenium hysterophorus* L.		Herb	Through out the year	Maira	700
		56	*Pulicaria crispa* (Forssk.) Oliv.		Herb	November-March	Shatal	1000
		57	*Sassurea heteromalla* (D.Don) Hand		Herb	May-June	Shatal	1500
		58	*Senesio chrysanthemoides* DC.	Ghopga	Herb	June-Sept	Kamesar	2670
		59	*Silybum marianum* (L) Gaertn	Karizaghena	Herb	Marc-June	Gave bazar	800
		60	*Solidago virgaurea* L.	Bangira	Herb	May-July	Ganthar	1800
		61	*Sonchus asper* (L) Hill.	Shodapae	Herb	April-July	Sargay	900
		62	*Taraxacum officinale* Webb.	Ziar guley	Herb	April-July	Sabe hill	1200
		63	*Tegetes erecta* L		Herb	April –June	Shah dak	700
		64	*Vernonia Sinerea* (L.) Lees.	Tor Zeera	Herb	May-July	Sorban	2000
		65	*Xanthium strumarium* L.	Ghishkey	Herb	May-July	Kotley	1510
16	**Balsaminaceae**	66	*Impatiens bicolor* Royle	writh athrang	Herb	June- Sept.	Machasar	3000
		67	*Impatiens edgeworthii* Hk. f.	Ziar athreng	Herb	June- Sept.	Machasar	2900
17	**Berberidaceae**	68	*Berberis lycium* Royle.	Kwaray /Sumbal	Shrub	April- Agust	Soral	1200
18	**Betulaceae**	69	*Alnus nitida* (Spach.) Endl.	Girae/ Sharol	Tree	Agust- Nov.	Soral	1250
19	**Bombacaceae**	70	*Bombax ceiba* L.	Simble	Tree	December-March	Kotkay	1820
20	**Boraginaceae**	71	*Cynoglossum lanceolatum* Forssk.	Pachy	Herb	May-June	Surmal	800
		72	*Lithospermum officinale* L.		Herb	April- August	Kotkay	1500
		73	*Onosma hispida* Wall. ex G. Don	Kairry	Herb	March-June	Shagai	820
		74	*Trichodesma indicum* (L.) R. Br.		Herb	Through out the year	Soral	1230
21	**Brasicaceae**	75	*Alliaria petiolata* (M.Bieb)Cavara & Grande	Gangli thom/ Balu	Herb	May-July	Nawagae	730
		76	*Capsella bursa-pestoris* L.	Bambaesa	Herb	March-June	Haleema	1300
		77	*Cardamine hirsuta* L.	Chargh butay	Herb	March-May	Aarekh	1070
		78	*Erophila verna* L.		Herb	March – June	Tot Banda	800

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		79	*Lepidium aucheri* Boiss	Halam	Herb	Marh-June	Berhi	1350
		80	*Nasturtium officinale* R. Br.	Tarmera	Herb	April-July	Shagae	670
		81	*Neslia apiculata* Fisch		Herb	April-June	Shatal	1000
		82	*Sisymbrium irrio* L.	Oorae	Herb	April-June	Darbani	790
		83	*Arabidopsis thaliana* (Linn.) Heynh.		Herb	April-July	Judbah	900
		84	*Coronopus didymus* (L.) Sm.	Hazar dani	Herb	April-August	Soral	1650
22	**Buddlejaceae**	85	*Buddleja crispa* Bth.	Booe	Shrub	March-May	Ganthar	2300
23	**Buxaceae**	86	*Buxus wallichiana* Bill.		Shrub	March-May	Ganthar	2600
		87	*Sarcococca saligna* (D.Don) Muell.	Ladan	Shrub	April-Sept	Brathoo	2600
24	**Cactaceae**	88	*Opuntia dillenii* Haw.	Zakoom	Herb	June-August	Tot banda	800
25	**Campanulaceae**	89	*Campanula benthamii* Wall.		Herb	March-July	Soral	1200
		90	*Codonopsis clematidea* (Schrenk) C.B.Clarke.		Herb	July – august	Soral	1000
26	**Cannabaceae**	91	*Cannabis sativa* L.	Bhang	Herb	April-July	Kandar	800
27	**Capparidaceae**	92	*Cleome scaposa* DC., Prodr		Herb	May-August	Shatal	840
28	**Caprifoliaceae**	93	*Viburnum grandiflorum* Wall. ex DC.	Chamiaray	Shrub	March-July	Kandow/Manasar	2400
		94	*Viburnum cotinifolium* D. Don	Ghanpmzewa	Shrub	March- May	Mana sar	2600
29	**Caryophyllaceae**	95	*Silene conidea* L.	Babrai	Herb	May-July	Sarbago	1580
		96	*Sillene vulgaris* (Moench) Garcke	Matranga	Herb	May- Agugust	Sarbago	730
		97	*Stellaria media* (L.) Vill.	Laroley	Herb	April-August	Aarakh	1200
30	**Celastraceae**	98	*Maytenus royleanus* (Wall. ex Lawson) Cufodontis	Patakhi / Azghakay	Shrub	March-July	Kotkay	1150
31	**Chenopodiaceae**	99	*Chenopodium album* L.	Larmay Sarmea	Herb	March-May	Dadam	700
		100	*Chenopodium ambrosioides* L	Benakai	Herb	Mach-May	Dadam	756
		101	*Chenopodium botrys* L.	Skha Khawra	Herb	April-June	kotley	1050
		102	*Chenopodium murale* L.	Skha Botey	Herb	April-June	Gut	1100
32	**Convolvulaceae**	103	*Convolvulus arvensis* L.	Pirwathai	Herb	April-July	Jegal	840
		104	*Evolvulus alsinoides* (L.)	Sargulay	Herb	April-June	Jegal	1100
33	**Cornaceae**	105	*Cornus macrophylla* Wall. ex Roxb	Kandara	Tree	April - june	Soral	1300
34	**Cucurbitaceae**	106	*Citrullus colocynthis* (Linn.) Schrad	Tumba / Manzil/ Markundai	Herb	May-July	Dadam	800
		107	*Solena amplexicaulis* (Lam.)Gandhi	Kakora	Herb	April-June	Soral Village	1240
35	**Cuscutaceae**	108	*Cuscuta reflexa* Roxb	Zeara Zeelai	Herb	April-July	Berrhi	1100
		109	*Cuscuta gigantea* Griff.	Ooloe	Herb	April-July	Soral	1100
36	**Dioscoraceae**	110	*Dioscorea deltoidea* Wall.ex Kunth	Konel	Herb	April-July	Chor kalan	2300
37	**Ebenaceae**	111	*Diospyrus lotus* L.	Tor Amlok	Tree	June-Agugust	Manasar	2800
38	**Euphorbiaceae**	112	*Andrachne cordifolia* (Wall. ex Decne.) Muell.	Kurkun	Shrub	June-Oct.	Shahtal	1500
		113	*Euphorbia helioscopia* L.	Mandro	Herb	April-June	Kalash	1650
		114	*Euphorbia hirta* L.	Skha Botay	Herb	June-August	Kalash	1650
		115	*Euphorbia hispida* Boiss.		Herb	May-July	Soral	1100

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		116	*Euphorbia peplus* L.		Herb		Nawagae	650
		117	*Euphorbia prostrata* Aiton		Herb		Nawagae	700
		118	*Euphorbia Wallichii* Hk.	Zangly Mandaro	Herb	June-Sept.	Larhsar	2650
		119	*Mallotus philippensis* (Lam.)Muess.	Kambella	Shrub	July-Sept.	Kandar	900
		120	*Ricinus communis* L.	Arharhanda	Herb	March-July	Judbah	700
39	**Fagaceae**	121	*Quercus dilatata* Lindle. ex Royle	Tor banj	Tree	April – May	Manasar	2500
		122	*Quercus baloot* Griff	Brungi	Tree	April –May	Chor kalan	2300
		123	*Quercus leucotrichophora* A. Camus	Rin	Tree		Manasar	2400
		124	*Quercus incana* Roxb	Spin banj	Tree	April-May	Doda	1100
40	**Fumariaceae**	125	*Fumaria indica* (Hausskn) Pusley	Papra	Herb	April-June	Soral	1230
		126	*Fumaria officinalis* L.		Herb	March-July	Soral	1200
41	**Gentianaceae**	127	*Gentiana kurroo* Royle	Nilkant	Herb	Agust-Oct.	Chota Kandow	2700
		128	*Swertia ciliata (G. Don) B.L. Burtt*	Chirata/ Momera	Herb	June-August	Loto Banda	1800
42	**Geraniaceae**	129	*Geranium lucidum* L.		Herb	April-June	Danda Banda	1300
		130	*Geranium ocellatum* Camb.		Herb	April-July	Shangaldarh	1500
		131	*Geranium wallichianum* D.Don ex Sweet	Sargrrai	Herb	June-August	Shangaldarh	2600
43	**Guttiferae**	132	*Hypericum oblongifolium* L.	Shin Chai	Shrub	Mach-July	Soral	1300
		133	*Hypericum perforatum* L.	Warmang Booty	Herb	June-September	Soral	1200
44	**Hippocastanaceae**	134	*Aesculus indica* (Wall.ex Camb.)Hk.	Ashanr	Tree		Jabara	2300
45	**Juglandaceae**	135	*Juglans regia* Linn	Ghuz	Tree	April- July	Soral	1240
46	**Lamiaceae (Labiateae)**	136	*Ajuga bracteosa* Wall., Benth.	Guti	Herb	April-June	Shagae	800
		137	*Ajuga reptan* L.	Guti	Herb	April-June	Nawagae	1800
		138	*Anisomeles indica* (L.) O. Kuntze		Herb	April-Sept	Shangaldarh	2400
		139	*Colebrookia oppositifolia* Smith	Balbadarh/ Benda	Shrub	Jan.- April	Kotkay	700
		140	*Isodon rugosus* (Wall. ex Benth.) Codd	Khangere/ Salasla	Shrub	July-Sept	Larsar	2300
		141	*Lamium amplexicaule* L.		Herb	March-June	Shatal	1450
		142	*Marrubium vulgare* L.	Gandana	Herb	May-August	Shatal	2000
		143	*Mentha arvensis* L.	Podina	Herb	July-August	Shagae	800
		144	*Mentha longifolia* (L.) Huds	Vanaley	Herb	June-August	Shagae	760
		145	*Mentha spicata* L.	Zangli Podina	Herb	May-July	Soral	1200
		146	*Nepeta cataria* L.	Jalbang	Herb	April-June	Guth	1400
		147	*Otostegia limbata* (Bth) Boiss	Spinaghzai	Shrub	March-June	Tor Kandow	825
		148	*Salvia lanata* Roxburgh	Khathriki	Herb	April- july	Soral	1200
		149	*Salvia moorcroftiana* Wall. ex Benth.	Kali jarhi / Khar ghoagh	Herb	April-June	Soral	1200
		150	*Stachys parviflora* Benth.	Spera Botay	Herb	March-July	Larhsar	2300

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		151	*Thymus linearis* Benth	Da Ghar sper kay	Herb	Jun-August	Manasar	2500
		152	*Salvia aethiopis* L.	Kali jarhi	Herb	March-July	Kamesar	2300
47	**Leguminosae (Caesalpinioideae)**	153	*Caesalpinia decapitala* (Roth) Alston.	Jara	Shrub	March- April	Shagae	800
		154	*Bauhinia variegata* Linn	Kulhar	Tree	April-July	Kotkay	750
47	**Leguminosae (Mimosoideae)**	155	*Acacia modesta* Wall.	Palosa	Tree	March- July	Kotkay	800
		156	*Acacia nilotica* Linn.	Kikar	Tree	June- August	Kandar	700
		157	*Albezzia lebbek (*L) Benth.	Srikh	Tree	April –July	Berhi	1200
		158	*Albezzia procera (*Roxb) Benth.		Tree	April- june	Berhi	900
47	**Leguminosae (Papilionoideae)**	159	*Robinia pseudoacacia* Linn.	Toor kiker	Tree	April-June	Kotkay	900
		160	*Butea monosperma* (Lam.) O. Kuntz.	Badar	Tree		Kotkay	680
		161	*Crotolaria mediginea* Lamk		Herb		Shagae	700
		162	*Delbergia sisso* Roxb.	Shaewa	Tree	May-July	Kandar	700
		163	*Indigofera heterantha* Wall.ex rand.	Ghoraja	Shrub	May-July	Soral	1260
		164	*Trifolium repens* L.	Shaotal	Herb	April-June	Judbah	800
		165	*Argyrolobium roseum* (Comb) Janb & spach	Makana	Herb	February-April	Banda	1500
		166	*Astragalus amherstianus* Royle ex Benth.	Asli Batawach	Herb		Soral	1300
		167	*Astragalus graveolens* Buch.-Ham.ex Benth.	Bitawach E Naqli/Azghakay	Herb	April-June	Soral	1250
		168	*Astragalus macropterus* DC		Herb	June-July	Danda Banda	1600
		169	*Astragalus neomonodelphus* H. T. Tsai & T. T. Yu		Herb		Soral	1300
		170	*Lathyrus aphaca* L	Korkamani	Herb	March-May	Maira	600
		171	*Lathyrus emodii* (Wall.ex Fritsch) Ali		Herb		Maira	600
		172	*Lotus corniculatus* L.		Herb	March-May	Dheri	580
		173	*Medicago polymorpha* L.	Shpeshtiary	Herb	March-April	Dheri	800
		174	*Melilotus officinalis* (L.)Desr.	Lewanay	Herb	April-June	Shadak	700
		175	*Trifolium pratense* Linn.		Herb	July – august	Judbah	720
		176	*Vicia hirsuta* (Linn.) S.F.Gray	Marghaikhpa	Herb	March-June	Shadak	600
48	**Loranthaceae**	177	*Viscum album* Linn.	Prewatai	Shrub	July-September	Manasar	2360
49	**Lythraceae**	178	*Woodfordia fruticosa* (L.)S.Kurz	Thawi	Shrub	March-May	Soral	1230
50	**Malvaceae**	179	*Malva neglecta* Wall.	Panerak	Herb	April-July	Dhera kahu	530
		180	*Malva sylvestris* Linn	Samchal	Herb	May- Agugust	Dhera kahu	530
51	**Meliaceae**	181	*Azadiracha indica* L.	Neem	Tree	April-May	Soral	1200
		182	*Cedrella serrata* Royle	Daravi	Tree	May-June	Shatal	1700
		183	*Melia azedarach* Linn.	Bakaina/Lagan	Tree	April- July	Daur Maira	680
52	**Menispermaceae**	184	*Cissampelos pareira* Linn	Katoon	Herb	March-july	Macahasar	2200
53	**Moraceae**	185	*Broussonetia papyrifera* (L.)L' Herit ex Vent	Kaghazi toot	Tree	June-July	Kotkay	1100

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		186	*Ficus benghalensis* L.	Barh	Tree	Through out the year	Judbah	600
		187	*Ficus carica* Forsk.	Inzar	Tree	April-June	Dorh Mera	600
		188	*Ficus elastica Roxb.*	Rubber	Tree	March-April	Dadam	700
		189	*Ficus palmata* Forsk.	Inzar	Tree	March-June	Daur Maira	600
		190	*Ficus racemosa* L.	Armol	Tree	July-August	Berhi	1800
		191	*Moras nigra* L.	Tor toot	Tree	March-may	Kotkay	730
		192	*Morus alba L.*	Spin Toot	Tree	May-June	Kandar	680
54	**Myrsinaceae**	193	*Myrsine africana* Linn	Khukhar	Shrub		Kotkay	638
55	**Myrtaceae**	194	*Euclaptus sp.*	Leichi	Tree	April-June	Kandar	700
56	**Nyctaginaceae**	195	*Mirabilis jalapa* L.	Gul e badam	Herb	June-August	Balkot	950
57	**Oleaceae**	196	*Jasminum humile* Linn	Konkoni	Shrub	April-July	Soral	1200
		197	*Jasminum nudiflorum* Lindl.	Zangli Chambeli	Shrub	March-May	Soral	1200
		198	*Olea ferruginea* Royle	Khoona	Tree	April-June	Arnil	1800
58	**Onagraceae**	199	*Oenthera rosea* L.		Herb	march-July	Soral	1100
59	**Oxalidaceae**	200	*Oxalis carniculatus* L.	Threwakey	Herb	March-June	Shagae	700
60	**Plantaginaceae**	201	*Plantago lanceolata* L.	Shalet	Herb	March-May	Guth	1000
		202	*Plantago major* L.	Baltanga jabai	Herb	March-May	Guth	1100
61	**Platanaceae**	203	*Platanus orientalis L.*	Chinar	Tree	May-June	Soral	1250
62	**Podophyllaceae**	204	*Podophyllum emodi* Wall. ex Royle,	Ban kakri / Banwangun	Herb	April-May	Tor band	2000
63	**Polygonaceae**	205	*Persicaria hydropiper (*L.) Spach,		Herb	April-Sept	Maira	500
		206	*Polygonum aviculare* Linnaeus	Pal poluk	Herb	April-May	Shagae	770
		207	*Polygonum plebejum* R. Br.		Herb		Shagae	680
		208	*Rumex acetosa* L.	Tarokey	Herb	May-Sept.	Zizari	600
		209	*Rumex dentatus L.*	Shalkhay	Herb	May-June	Zizari	620
		210	*Rumex hastatus* D. Don, Prodr.	Tarokai	Herb	April-June	Soral	1100
		211	*Rumex vesicarius* L.		Herb	April-June	Tor Kandow	700
		212	*Bistorta amplexicaulis* (D.Don) Greene	Rain	Herb	March-June	Soral	1200
64	**Portulaceae**	213	*Portulaca oleracea* L.	Warkharay	Herb	July-September	Shatal	1600
65	**Primulaceae**	214	*Anagalus arvensis* L.	Ghutyalai	Herb	Feb.-April	Tot Banda	800
66	**Punicaceae**	215	*Punica granatum* Linn	Narsaw-ay/ Anunghoray	Tree	March-May	Dorh mera	600
67	**Ranunculaceae**	216	*Aconitum napellus* L.		Herb	Agust-Sept.	Haleema	1200
		217	*Aconitum Sp*	Sarbawali	Herb	July-September	Soral	1200
		218	*Aquilegia Sp.* L	Oudi Guley	Herb	April-August	Soral	1260
		219	*Caltha alba* Camb.	Makhanr Path	Herb	May-July	Kalash	2300
		220	*Clematis grata* Wall.	Chenjan Wala	Herb	June-August	Kotkay	600
		221	*Clematis montana* Buch		Herb		Kalash	1800
		222	*Clematis orientalis* L.	Zelay	Herb	June-August	Kandar	800

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		223	*Ranunculus arvensis* L.	Chaghchejakai	Herb	May-July	Shadak	600
		224	*Ranunculus muricatus* L.	Ziar guley	Herb	April-June	Shadak	6210
		225	*Ranunculus scleratus* L.	Jashaghai	Herb	April-June	Gazagat	1600
68	**Rhamnaceae**	226	*Ziziphus jujuba* Mill.	Sezen	Tree	May-June	Tot Banda	740
		227	*Ziziphus nummularia* (Burm. f.) Wight & Arn.	Karkanda	Shrub	May-July	Gawe Bazar	600
		228	*Ziziphus oxyphylla* Edgew.	Elanai	Shrub	June- September	Tot Banda	800
69	**Rosaceae**	229	*Cotoneaster bacillaris* Wall. ex Lindl	Looni	Shrub	May-August	Berhi	1100
		230	*Cotoneaster frigidus*Wall. ex Lindl		Shrub	May-August	Guth	1300
		231	*Cotoneaster nummularia* Fish. & Mey.	Mamana	Shrub	May-July	Berhi	1000
		232	*Cydonia oblonga* Miller	Pub	Tree	March-May	Soral	1400
		233	*Duchesnea indica* (Andr.)Focke	Mewa	Herb	March-May	Shagae	800
		234	*Fragaria nubicola* (Hook.f.) Lindl. ex Lacaita	Da zimakaytoot	Herb	May-August	Shagae	800
		235	*Potentilla nepalensis* Hook. f.	Kunacy	Herb	June-August	Kamesar	2500
		236	*Prunus armeniaca* L.	Khubanai	Tree	Feb.-March	Shatal	1100
		237	*Pyrus communis* L.	Nashpati	Tree	Feb.-April	Shangaldarh	2300
		238	*Pyrus pashia Ham* ex D. Don	Tangai	Tree	March-May	Shangaldarh	2300
		239	*Rosa indica* L.	Sor gulab	Shrub	April-June	Shagae	700
		240	*Rosa moschata* J. Herm		Shrub		Barhi	1000
		241	*Rubus ellipticus* Smith.	Karwara	Shrub	May-July	Guth	1300
		242	*Rubus fructicosus* Hook .f	Karwara	Shrub	March-May	Berhi	1040
70	**Rubiaceae**	243	*Borreria articularis* (L.F.) FN . Will.		Herb		Guth	1040
		244	*Galium aparine* L.		Herb	March-July	Gantharh	2500
		245	*Galium elegans* Wall. In Roxb.		Herb	June-August	Gantharh	2500
		246	*Galium tenuissimum* M. Bieb.		Herb	June-August	Kara Kandow	2600
71	**Rutaceae**	247	*Boenninghausenia albiflora (*Hook.) Reichb.	Pissu mar	Herb	July-August	Bartuni Machaser	3000
		248	*Skimmia laureola* (DC.) Sieb. & Zucc. ex Walp	Nameer/ Nazar pana	Shrub	June- September	Machasar	3000
		249	*Zanthoxylum armatum* DC.	Dambara	Shrub	April-June	Dhorh Maira	600
72	**Salicaceae**	250	*Populus alba* L.	Watani sperdar	Tree	April-June	Soral	1300
		251	*Salix tetrasperma* Roxb.	Walla	Tree	April-June	Soral	1200
73	**Sapindaceae**	252	*Cardiospermum halicacabum* L.	Khubara plt	Herb	Oct.- Nov.	Shangal darh	2500
		253	*Dodonaea vescosa* (L.) Jacq	Ghoraskai	Shrub	May-june	Kunhar	700
		254	*Sapindus mukorossi* Gaertn.,	Ritha	Tree	May-June	Kalash	1300
74	**Saxifragaceae**	255	*Bergenia ciliata* Sternb.	Koerat	Herb	May-july	Kamesar	2500
75	**Scrophulariaceae**	256	*Verbascum thapsus* L.	Kharghwagh	Herb	March-May	Kotkay	700
		257	*Mazus pumilus* (N. L. Burman) Steenis		Herb	March-May	Kotkey	700
		258	*Veronica persica* Poiret		Herb	March-July	Shadak	700

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		259	*Veronica polita* Fr.		Herb	March-May	Asharhe	900
76	**Simarubaceae**	260	*Ailanthus altissima* (Mill.) Swingle	Lagan	Tree	March-June	Sorban	2100
77	**Solanaceae**	261	*Datura stramonium* L.	Batoora	Herb	June-Sept.	Dadam	690
		262	*Solanum incanum* L.		Herb	Through out the year	Kotkay	700
		263	*Solanum nigrum* L.	Karmacho	Herb	April-June	Dadam	700
		264	*Solanum pseudocapsicum* L.	Mirchola	Shrub	May- June	Machra Akazai	600
		265	*Solanum virginianum* L.		Herb		Tor Kandow	800
		266	*Withania somnifera* (L.) Dunal		Shrub	March-July	Kalash	1800
78	**Thymeliaceae**	267	*Daphne mucronata* Royle	Laighonai/ Kutilal	Shrub	April-June	Sorban	2300
79	**Tiliaceae**	268	*Corchorus trilocularis* L.		Herb	June-Sept.	Shatal	1000
		269	*Grewia optiva* Drummond .ex Burret	Pastaw-oney	Tree	April- Sept.	Shadak	500
80	**Ulmaceae**	270	*Celtis australis* L..	Taghagaha / Batkar	Tree	March-May	Charh/ Shagae	1100
81	**Urticaceae**	271	*Urtica dioica* L.	Jelbung	Herb	May-July	Bartuni	2500
		272	*Urtica pilulifera* L.		Herb	May-July	Bartuni	2500
		273	*Debregeasia salicifolia* (D.Don) Rendle	Chewr	Shrub	March-May	Arekh	1800
82	**Valerianaceae**	274	*Valeriana jatamansi* Jones	Mushk bala	Herb	March- May	Arekh	1800
83	**Verbenaceae**	275	*Vitex negundo* L.	Marghondai	Shrub	May-July	Kalash	1700
		276	*Verbena officinalis* L..	Shmoakai	Herb	May-Sept.	Palosa	800
84	**Violaceae**	277	*Viola canescens* Wall. ex Roxb.		Herb	April-July	Shangal darh	2500
		278	*Viola odorata* L.	Banafsha	Herb	May-August	Mana sar	2500
85	**Vitaceae**	279	*Vitis vinifera* L.	Kwar	Shrub	May-June	Soral	1400
	Gymnosperms	280						
86	**Pinaceae**	281	*Cedrus deodara (Roxb. ex D. Don), G. Don*	Lamb. / Ranzhra	Tree	_____	Machasar	3000
		282	*Picea smithiana* (Wall.) Boiss.	Nakhtar	Tree	_____	Machasar	3000
		283	*Pinus roxburghii* Sargent	Nakhtar	Tree		Guth	1240
			Pinus wallichiana A. B. Jackson	Pewach	Tree	_____	Manasar	2500
		284	*Abies pindrow* Royle	Achal	Tree		Machasar	3000
87	**Taxaceae**	285	*Taxus wallichiana* (Zucc.)Pilger	Bunya	Tree	_____	Arekh	2000
	Monocotyledons	286						
88	**Agavaceae**	287	*Agave sisalana* Perrine ex Engelm.		Herb	April-June	Darbani	600
		288	*Yucca aloifolia* L.		Shrub	Jun	Darbani	600
89	**Alliaceae**	289	*Allium griffithianum* Boiss.		Herb	March-June	Tot Banda	800
90	**Amaryllidaceae**		*Narcissus tazetta* L.	NargisGulae	Herb	December-March	Aararkh	2450
91	**Araceae**	290	*Acorus calamus* L.	Skhaweja	Herb	April-July	Shatal	1625
		291	*Arisaema flavum* (Forssk.)Schott.	Marjaarei	Herb	May-July	Gantharh	2550
		292	*Arisaema jacquemontii* Blume	Marjaarei	Herb	May-July	Manasar	2400
		293	*Arisaema utile* Hook.f.ex. Schott.	Tora marjarai	Herb	May-July	Gantharh	2050

Table 1. (Cont;d)

No.	Family	No	Botanical Name	Local Name	Habit	Flowering period	Locality	Altitude
		294	*Colocasia esculenta* (L.) Schott	Karchalo	Herb	June-August	Judbah	700
92	**Asparagaceae**	295	*Asparagus adscandens* Roxb.	Spin tindoray	Herb	March-July	Totbanda	800
		296	*Asparagus capitatus* Baker	Tindoray	Herb	March-July	Machra Akazai	700
		297	*Asparagus officinalis* L.	Tindoray	Herb	March-June	Toot banda	830
93	**Asphodelaceae**	298	*Aloe vera* (L.) Burm.	Zaqam botay	Herb	May-August	Deheri	700
94	**Cannaceae**	299	*Canna indica* L.		Herb	March-June	Dehri	700
95	**Colchicaceae**	300	*Colchicum luteum* Baker		Herb	Feb-May	Pyan	2300
96	**Commelinaceae**	301	*Commelina benghalensis* L.	Kanchara	Herb	May-August	Shatal	1450
		302	*Commelina poludosa* Blume	Kanjuna	Herb	May-june	Shatal	1400
97	**Convallariaceae**	303	*Polygonatum multiforum* (L.) All.	Noor e Alam	Herb	April-July	Shagae	600
		304	*Polygonatum Verticillatum* All.	Noor e Alam	Herb	June-August	Shagae	600
98	**Cyperaceae**	305	*Cyperus cyperoides* L.	Della	Herb	May-June	Berhi	1200
99	**Liliaceae**	306	*Gagea lutea* (L.) Ker-Gawl	Qaimat Gulay	Herb	June-August	Mahtorh	1100
		307	*Tulipa clusiana* (Hook.) Regel	Gantul	Herb	March-May	Banda	1100
100	**Palmae**	308	*Nannorrhops ritchieana* (Griff.) Aitchison	Mazri palm	Shrub		Tot Banda	700
		309	*Phoenix dactylifera* L.	Khajoor	Tree	March-April	Darbani	600
		310	*Phoenix sylvestris* (L.) Roxb.	Jangli khajur	Tree	March-April	Darbani	600
101	**Poaceae (Graminae)**	311	*Agrostis stolonifera* L.		Herb	March-June	Shatal	1500
		312	*Apluda aristata* L.		Herb		Kamesar	2400
		313	*Aristida depressa* Retz		Herb	March-July	Nawagae	800
		314	*Arundo donax* L.	Nara	Herb	April-June	Kotkay	760
		315	*Avena fetua* L.	Jawdar	Herb	April-July	Judbah	800
		316	*Bambusa glaucescens* (Willd.) Sieb.	Bans	Shrub		Kunhar	700
		317	*Brachiaria ramosa* (L.) Stap		Herb	July – Oct	Kandar	700
		318	*Calamagrostis decora* Hook. f., Fl. Bri		Herb		Berhi	1000
		319	*Chrysopogon serrulatus* Trin		herb	Jun-sep	Arnil	730
		320	*Cynodon dactylon* (L.) Pers	Kabal	Herb	May-August	Arnil	730
		321	*Dactylotenium aegyptium* (L.) P.Beauv		Herb		Shahtal	1530
		322	*Deschampsia caespitosa* L	Broom grass	Herb		Kotkay	700
		323	*Desmostachya bipinnata* (L) Stapf	Drab	Herb	May-August	Kotley	700
		324	*Dichanthium annulatum* (Forssk) Stapf		Herb		Gigani	1600
		325	*Digitaria nodosa* Perl.		Herb		Berhi	1000
		326	*Imperata cylindrica* (L.)P. Beauv		Herb		Dehra kahu	570
		327	*Phalaris minor* Retz		Herb		Shadak	600
		328	*Phragmites australis* (Cay.) Trin.		Herb	July- Oct	Sorban	1200
		329	*Poa bulbosa* L.		Herb	April-October	Larhsar	2000
		330	*Poa alpina* L.		Herb	June-Sept.	Gantharh	2550
		331	*Sorghum haleeparse* (L.) Pers.	Dadam	Herb	May-Sept.	Danda	1200

The check list presented here is based principally on Benthum & Hooker (1862-1883) system of classification

Discussion

The first extensive exploration record for Pakistan is available in J. D Hooker's "Flora of British India" (1872-1997) Most of the area of country was surveyed by those gentlemen. Later on R. R. Stewart collected plants from almost all parts of the country and deposited about 6000 species at Garden College Herbarium, Rawalpindi. The *Flora of Pakistan* is comprehensive inventory of plants of Pakistan. About 47 Botanists have contributed to *Flora of Pakistan*. Fazal *et al*., (2010) documented 211 species of 170 genera and 66 families from District Haripur. Shah & Khan (2006) recorded 80 plant species belong to 49 families from Siran Valley Mansehra, which are used as medicinal plants for different ailments. Many regions have recently been introduced in floristic term. Haq *et al*., (2010) documented 402 vascular plants species belonging to 110 families from Nandiar Valley western Himalya, Pakistan. A research project has been conducted by Khan *et al.,* (2013) to study ecosystem services in Naran Valley. They discovered 101 plants belonging to 52 families used by the inhabitants for different medicinal purposes. Haq *et al*., (2015) reported 157 plant species from subtropical zone of Nandiar Khuwar catchment area Western Himalaya. Their results revealed that Nanophyte was dominant life form followed by Therophyte. Urooj *et al*., (2015) studied and quantified the herbaceous flora around the vicinity of Mangla dam. They identified 37 species belonging to 17 families from the study area. Extensive review of literature revealed that there is not a single record of collected specimens from District Tor Ghar. This region formerly known as Kala Dhaka was unexplored for its plant biodiversity. Keeping this in view present study was conducted to explore and document the phyto-diversity of this area. In future it will serve as a base line for ecological, ethnobotanical and conservation study.

Our findings showed that the study area is blessed with beautiful and diverse ecological habitat and inhabit high floral diversity. Hosting 331 vascular plants species is evidence of rich diversity of the region though most of the region exhibit harsh climate. Diversity in vegetation of the region is representative of Sub tropical, Moist temperate and sub alpine type. Most of these plants are important from ecosystem services point of view such as medicinal plants, wild vegetables and timber plants. *Berberis lycium, Acacia modesta, Ajuga bracteosa, Mentha longifolia, Punica granatum, Podophyllum emodi, Valeriana jatamansi, Viola canescens, Skimmia laureola and Zanthoxylum armatum* are common medicinal plants. Important timber yeilding plants include *Abies pindrow, Aesculus indica, Acacia modesta, Juglans regia, Picea smithiana, Pinus roxburghii, Pinus wallichiana, and Taxus wallichiana* (Haq *et al*., 2010 & Awan *et al*., 2013). *Taraxiacum officinale, Trifolium repens, Rumex dentatus, Rumex hastatus, Oxalis corniculata* and *Caralluma tuberculata* are the plant species used as wild vegetables. (Khan & Khatoon 2008, Haq *et al*., 2010).

It is believed that this check list of vascular plant species of the District Tor Ghar provides for the first time a comprehensive knowledge of the floristic diversity of the area. This data could be used as reference for further scientific study. Such checklists for unexplored regions have also been published previously by various authors and can be seen in the literature. These include Zaheer & Sardar, (2008), Fazal *et al.,* (2010), Ilyas *et al.,* (2013 and Waris *et al*., (2013).

Badshah *et al*., (2013) reported that Poaceae, Paplionaceae and Asteraceae are the larger families in the district Tank, Pakistan. Similar results were obtained by many other botanists like Marwat & Qureshi (2000) and Durrani *et al*., (2005) in their respective study area. Many other studies have indicated the dominance of Asteraceae and Poaceae like Fazal *et al.,* (2010), Saima *et al.,* (2010), Khan *et al*., (2014), Khan *et al*., (2015) and Hussain *et al* ., (2015). Our results also advocate that Asteraceae, Leguminosae and Poaceae are larger families in the study area. Further study will be helpfull to find out the potential of these plants for different uses. Our present project is continuing till 2015 in which we will prepare different indices as well as mapping of the vegetation of Tor Ghar District.

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