

A CHECKLIST OF PHANEROGAMIC FLORA OF HARIPUR HAZARA, KHYBER PAKHTUNKHWA, PAKISTAN

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Abstract

Taxonomic studies were undertaken for the purpose of collecting information about floristic composition of District Haripur during the years 2004-08. The flora of the area consists of 211 species of 170 genera, distributed among 66 families. Of which, 5 species of 5 genera are Gymnospermic distributed among 4 families. Out of 66 families, 7 are Monocotyledonous having 26 species distributed among 24 genera. Rest of the 55 families are dicotyledonous including 180 species distributed among 141 genera.

Introduction

District Haripur is situated in Hazara Division at an elevation of 610 m. It lies between the latitude 33°-44' to 34°-22' and longitude 72°-35' to 73°-15' (Fig. 1) Geographical significance of the district lies in the fact that its boundaries touch Mardan, a center of Gandhara civilization in the North-West Abbottabad in the North-East Mansehra district in North. Margalla hills range in South-East Swat valley in North-West Buner and Swabi district in the West. Besides these important districts of Khyber Pakhtunkhwa two districts of Punjab province i.e., Attock and Rawalpindi lies on southwest and southeast respectively. Federal capital Islamabad is also adjacent to the district in South.

Geographically, Haripur district is divisible into four regions i.e., Maidan-e-Hazara, Tanawal region, Khanpur Punjkahta, Chhachh (Maidan-e-Khari), which is mainly the study area, located in the west of the city. All submerged under the reservoir of Tarbela dam. The soil of the area is dissected loess plain or dissected piedmont plains in silty loam, silty clay loam texture respectively. The fertile land contains the common plants like *Dalbergia*, *Morus*, *Acacia*, *Zizyphus* etc. The most important rivers are Indus, Sirin, Dauor and Haro. The coldest months of the area are December and January while the maximum temperature is recorded in the months of June and July. Downpour falls in the months of July, August, December and January.

Literature regarding the research reveal that Hookers (1872-97), Brandis (1879), Parker (1956), Blatter & Farnandez (1933-35), Nasir (1959), Ali (1981-85), Stewart (1967-1972), Quraishi & Khan (1976), Qaiser (1973), Beg & Samad (1974), Kazmi (1974), Ghafoor (1974, 1981), Townsend (1974), Jafri & Ghafoor (1974), Austin & Ghazanfar (1979), Nazim-ud-din & Qaiser (1983), Nasir Yasin (1971, 1975, 1984, 1985), Radcliffe (1986) have contributed and are still contributing to the flora of Pakistan. Stewart (1972) prepared an annotated catalogue of the flora of Pakistan. Collectors have visited most parts of Pakistan, but no area has been thoroughly explored. So it was considered imperative to document the flora of the area.

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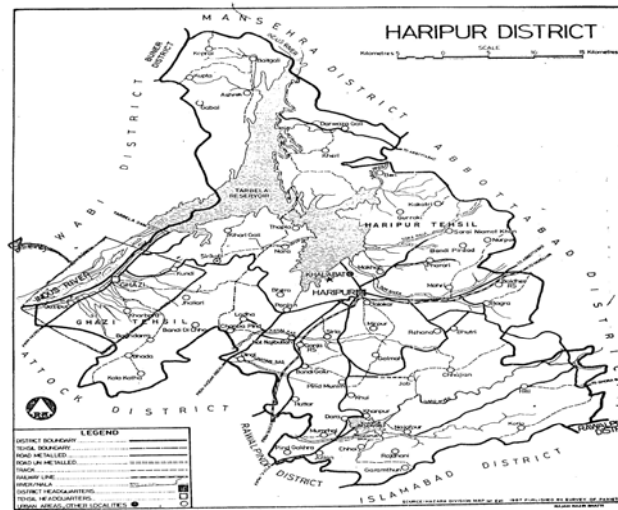


Fig. 1. Map of District Haripur showing collection sights.

Materials and Methods

Frequent field trips in different seasons 2004-08 were arranged to collect plants. Plants were dried and preserved with their full structure (stem, leaves, flowers, fruits and roots). Field information like habitat, associate species, status of plant, flower color, flowering season etc., were recorded; also the traditional knowledge about the indigenous plants like their common names was also collected from local people. Poisoning in Isopropyl alcoholic solution of Mercuric chloride was done. Again they were dried and then mounted on herbarium sheets. The field data was transferred to the herbarium sheets. The mounted specimens were identified through the available taxonomic literature, colored pictures, catalogues, manuals and floras both macro and microscopically. The specimens were deposited in the Herbarium, Pakistan Council of Scientific and Industrial Research Laboratories Complex, Peshawar (PES).

Discussion

This study was performed for bioperspective survey of plant resources for exploration, identification and documentation of economically and medicinally important plant species and wild relatives of the cash crops. In future, it will be helpful and serve for the conservation and sustainable utilization of plant resources of the area. The said area is suffering high pressures of biotic interferences but has got high floristic composition. In the light of the data recorded, a total of 211 species of vascular plants were identified from this area belonging to 170 genera and 66 families. Out of 66 families, 55 are Dicotyledonous having 141 genera and 108 species (85.3%), 7 families are Monocotyledonous with 24 genera and 26 species (12.3%), 4 families are Gymnospermic having 5 genera and 5 species (2.4%). Maximum species i.e., 18 were recorded in the case of Asteraceae (8.61%) followed by Poaceae with 16 species (7.7%), which is in turn followed by Brassicaceae having 11 species (5.3%). Information regarding botanical name, vernacular name, family, flower color, habit, plant height and flowering season of the species are given in the Check List (Table 1). The cultivated have also been reported (Table 2). The ratio of wild to cultivated is 61:39.s

Table I. Checklist of wild plant species distributed in Haripur Hazara.

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	Vou. no.	Date	Sub-locality
Alliaceae	<i>Allium Jaquemontii</i> Kunth, Enum.	Wild onion, Jangli Piaz	Herb	15-35 m	Rose colored	March-April	9801	09-03-05	Khalabat Township Qazian
Amaryllidaceae	<i>Narcissus tazetta</i> L.	Gul-e-nargis	Herb	20-60 cm	White with yellow cup	Winter months	9757	18-01-05	Malik Abad
Araceae	<i>Pistia stratiotes</i> L.	Water cabbage	Aquatic	10 cm	Spath white	Hot season	9872	15-06-05	Tarbela Road
Cannaceae	<i>Canna indica</i> L.	Indian shot, Hakik	Herb	3-5 m	Red, orange	March-Sep	9886	07-07-05	Tarbela Road
Cyperaceae	<i>Cyperus rotundus</i> L.	Nut grass, Musta Muthar, Deela ghass	Perennial	20-60 cm	Red or golden, Brownish	April-Sep	9847	13-05-05	Khalabat Township Qazian
Liliaceae	<i>Asparagus gracilis</i> Royle ex Baker	Shahghandal, Halyun	Woody herb	1 m	White	June-Sep	9892	07-07-05	Khalabat Township Qazian
Poaceae	<i>Avena sativa</i> L.	Oat, Jangli jai	Annual	30-150 cm	Brown	April-June	9813	02-04-05	Khalabat Township Tarbela Road
	<i>Cynodon dactylon</i> L. Pers.	Bermuda grass, Dub, Khabbal	Perennial	40 cm	Purple-Green	All round the year	9803	09-03-05	Tarbela Road
	<i>Dactyloctenium aegyptium</i> L. Willd.	Egyptian finger grass, Madhana	Annual	70-100 cm	Yellow green, Anthers white	July-Sep	9898	14-08-05	Tarbela Road
	<i>Dichanthium annulatum</i> Forssk. Stapf	Marvel grass, Palwan	Perennial	25-100 cm	Purplish green	March-Sep	9896	07-07-05	Tarbela Road
	<i>Elysiene indica</i> L. Gaertn.	Crab or crow footgrass, Chimber	Annual	15-85 cm	Green, Anthers pinkish	June-Aug	9881	29-06-05	Qazian
	<i>Eragrostis minor</i> Host, Gram. Austr.	Love grass, Pungent meadow grass	Annual	6-60 cm	Yellow green, leaden grey/pinkish	May-Sep	9846	13-05-05	Tarbela Road
	<i>Imperata cylindrica</i> L. Rauschel.	Japgrass, Sword, Blady grass, Siru	Perennial	10-120 cm	White	April-June	9853	13-05-05	Khalabat Township
	<i>Koeleria macrantha</i> (Ledeb.) Schult.	Hair grass, Crested koelaria	Perennial	10-40 cm	Silvery-green, brownish/ purple	April-Sep	9871	15-06-05	Khalabat Township
	<i>Poa annua</i> L.	Meadow grass, Goose grass, Six week grass	Annual	5-30cm	Pale or bright green, reddish or purplish	March-Sep	9781	07-03-05	Committee

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	You. no.	Date	Sub-locality
	<i>Polypogon fugax</i> Ness ex Steud.	Rabbit foot grass, Malhar	Annual	15-60 cm	Pale green or yellowish	May-Aug	9906	15-08-05	Along high way
	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	Bottle grass, Band kangni	Annual	5-130 cm	Yellowish green, purple	June-Sep	9907	15-08-05	Hattar Road
	<i>Sorghum halepense</i> L. Pers.	Cuba grass, Baru, Jawaar, Chinese sugarcane	Perennial	0.5-3m	Puplish to blackish brown	May-Oct	9921	11-10-05	Khalabat Township
Acanthaceae	<i>Dicliptera bubleuroides</i> Nees.	Foldwing, Kirch, Somni	Herb	90 cm	Pink	June- Oct	9911	10-09-05	Qazian
	<i>Justicia adhatoda</i> L.	Baikar, Vasaka	Shrub	2-2.5m	White	Nov- April	9765	23-02-05	Qazian
	<i>Justicia peploides</i> (Nees) T. Anders.	Water willow, Dianthera	Herb	45cm	Pinkish purple	July-Nov	9779	24-02-05	Khalabat Township
Aizoaceae	<i>Trianthema portulacastrum</i> L.	Horse purslane, Wisakh	Herb	35 cm	White	May- Oct	9880	29-06-05	Khalabat Township
	<i>Achyranthes aspera</i> L.	Apangkutri, Puthkanda	Herb	0.2-2m	Perianth purplish	May-July	9857	14-05-05	Khalabat Township
	<i>Alternanthera pungens</i> Kunth.	Joy weed, Kanchari	Prostrate herb	20-80 cm	Bracts white	June- Aug	9891	07-07-05	Khalabat Township
	<i>Amaranthus graecizans</i> L.	Spreading pigweed	Herb	45-75 cm	Bracts pale or reddish	May- July	9879	29-06-05	Along high way
	<i>Amaranthus spinosus</i> L.	Kantiali Chulai	Herb	1.5 m	Green	May- Aug	9859	14-05-05	Tarbela Roadside ifeld
	<i>Amaranthus viridis</i> L.	Chulai	Herb	20-75 cm	Green	June- July	9878	29-06-05	Khalabat Township
	<i>Digera muricata</i> L. Mart.	Sur gulay	Herb	20-60 cm	Pink-carmine	July- Sep	9908	15-08-05	Tarbela Roadside ifeld
Apiaceae	<i>Eryngium coeruleum</i> M-Bieb.	Sea holly, Pimpiti	Woody herb	75 cm	Purplish, Lilac	April-June	9850	04-04-05	Along highway
	<i>Scandix pectin-veneris</i> L.	Billi poncha, Venus comb	Herb	25 cm	White	March-June	9802	09-03-05	Khalabat Township

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	Vou. no.	Date	Sub-locality
Asclepidaceae	<i>Calotropis procera</i> (Ait.) Ait.f.	Ak, Mundar, Spalwaka	Shrub	2 m	White outside, purplish inside	Round the year	9804	09-03-05	Along highway
Asteraceae	<i>Anthemis cotula</i> L.	Stinking chamomile	Herb	60-70 cm	R.F white D.F yellow	March-Sep	9855	04-04-05	Tarbela Roadside field
	<i>Artemisia scoparia</i> Waldst. & Kit.	Jhau, Lasaj, Chaw, Marua	Woody herb	50-90 cm	Yellow	July-Nov	9910	15-08-05	Qazian
	<i>Bidens biternata</i> (Lour.) Merr. et Sherff	Spanish needle/ Gold cup silver plate, black jack	Herb	1-1.5 m	D.F yellow	Feb-Sep	9762	23-02-05	Committee
	<i>Calendula arvensis</i> L.	Field marigold, Ziargullay	Herb	15-20 cm	Sulphur yellow	Feb-May	9763	23-02-05	Khalabat Township
	<i>Carthamus oxyacantha</i> M.B. Fl. Taur.	Jeweled distaff thistle	Spiny-leaved herb	1.5 m tall	Yellow	March-Aug	9844	12-05-05	Hattar road
	<i>Centauria iberica</i> Trevisanus ex Sprengel	Iberian knapweed, Star thistle	Annuals-Perennial	20-200 cm	Purple, white	March-Aug	9866	15-06-05	Tarbela Roadside
	<i>Conyza bonariensis</i> (Linn.) Cronq.	Asthma weed	Woody herb	20-120 cm	Pale yellow	May-Aug	9843	12-05-05	Khalabat Township
	<i>Cousinia prolifera</i>	Cousinia	Herb	30-150 cm	Yellowish	June-Aug	9877	29-06-05	Khalabat Township
	<i>Eclipta prostrata</i> L.	False daisy, Bhangra	Aquatic herb	60-100 cm	White	Throughout the year	9929	10-01-08	Committee
	<i>Matricaria aurea</i> L. Boiss.	Golden Mayweed	Herb	20 cm	Yellow	May-July	9854	13-05-05	Khalabat Township
	<i>Parthenium hysterophorus</i> L.	Santa Maria feverfew, False ragweed, Bitter weed, Carrot grass	Woody herb	30-150 cm	White	Throughout the year	9928	10-01-08	Tarbela Roadside
	<i>Silybum marianum</i> (Linn.) Gaertn.	Milk thistle, kandari, Unt katara	Spiny herb	1-2 m	Purple, white	March-June	9873	29-06-05	Tarbela Roadside
	<i>Sonchus asper</i> (L.) Hill.	Sontati, Spiny sowthistle	Herb	20-100 cm	Yellow	Almost throughout year	9799	08-03-05	Committee
	<i>Taraxacum officinale</i> Weber	Dandelion, Hand Dudal	Milky Herb	10-50 cm	Yellow	March-April	9798	08-03-05	Khalabat Township
	<i>Xanthium strumarium</i> L.	Cocklebur, Katula, gars hundi	Herb	50-200 cm	Yellowish green	Aug-Oct	9905	15-08-05	Along highway

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	You. no.	Date	Sub-locality
Brassicaceae	<i>Brassica campestris</i> L.	Mustard, Saryaan, Sarson	Herb	30-160 cm	Yellow	March-May	9797	08-03-05	Along highway
	<i>Capsella bursa-pastoris</i> (L.) Medik.	Chambraka, Mothers heart, Shepherds purse	Herb	45 cm	White	Feb-June	9782	07-03-05	Khalabat Township
	<i>Coronopus didymus</i> (Linn.) Smith.	Swines cress	Herb	15-30 cm	Green	March-June	9796	08-03-05	Khalabat Township
	<i>Lepidium pinnatifidum</i> L.	Lepidium	Herb	50cm	Pale yellow	March-June	9783	07-03-05	Khalabat Township
	<i>Nasturtium officinale</i> R.Br.	Water cress, Taramira	Aquatic herb	20-80 cm	White	April-July	9837	04-04-05	Hattar road
	<i>Neslia apiculata</i> Fisch., C.A. Mey. & Ave'-Lall	Neslia	Herb	20-60 cm	Yellow	March-April	9831	04-04-05	Khalabat Township
	<i>Sinapis arvensis</i> L.	Wild mustard, Charlock, jangli sarson	Herb	20-60 cm	Yellow	April-June	9832	04-04-05	Tarbela Roadside field
	<i>Sisymbrium irio</i> L.	London rocket, Khubkalan, Khakasi	Herb	20-60 cm	Yellow	March-May	9833	04-04-05	Tarbela Roadside field
	<i>Thlaspi arvense</i> L.	Penny cress	Herb	20-60 cm	White	April-June	9829	04-04-05	Khalabat Township
Caesalpinaceae	<i>Cassia absus</i> L.	Jasmeejaz, Chaksu	Under-shrub	10-60 cm	Yellow	Sep-Nov	9957	02-10-08	Hattar road
Cannabaceae	<i>Cannabis sativa</i> L.	Bhang	Herb	20-90 cm	Greenish	April- Sep	9888	07-07-05	Hattar road
Capparidaceae	<i>Cleome viscosa</i> L.	Asian spider flower, Tick weed	Woody herb	1 m	Whitish, Yellowish	Aug-Oct	9920	11-10-05	Hattar road

Table I. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	Vou. no.	Date	Sub-locality
Caryophyllaceae	<i>Arenaria leptoclados</i> (Reichb.) Cuss.	Thyme leaf, sand wort	Herb	8-20 cm	White	March-September	9887	07-07-05	Khalabat Township
	<i>Cerastium glomeratum</i> Thuillier	Sticky chickweed, Sticky mouse ear	Herb	10-35 cm	White	April- July	9840	12-05-05	Khalabat Township
	<i>Silene conoidea</i> L.	Sand catchfly, Takla, Qardi	Herb	30-40 cm	Pink	March- May	9795	08-03-05	Tarbela Roadside field
	<i>Stellaria media</i> (Linn.) Cyr.	Winter weed, Chickweed	Prostrate herb	10-20 cm	White	Feb-Aug	9778	24-02-05	Khalabat Township
Chenopodiaceae	<i>Vaccaria hispanica</i> (Miller) Rauschert	China cockle, Cowherb	Herb	40-50 cm	Pink	Feb-April	9794	08-03-05	Tarbela Roadside field
	<i>Chenopodium album</i> L.	Wild spinach, Lamb's quarter, Bathu	Herb	10-150 cm	Green	Jan-Sep	9755	18-01-05	Tarbela Road
	<i>Chenopodium ambrosioides</i> L.	Mexican tea, Katto, Wormseed	Herb	80-120 cm	Green	April-June	9937	10-05-08	Tarbela Road
	<i>Chenopodium murale</i> L.	Goose foot, Bathu, Kurund	Herb	70-90 cm	Green	Jan-July	9766	23-02-05	Tarbela Road
Convolvulaceae	<i>Convolvulus arvensis</i> L.	Bind weed, Leli	Prostrate herb	20-80 cm	Pink, white	Through out the year	9805	09-03-05	Tarbela Road
	<i>Ipomoea carnea</i> Jacq. Enum.	Camudo-de-pita, Pink bush	Shrub	2.5 m	Purple	Aug-Dec	9956	26-12-08	Committee
Cuscutaceae	<i>Cuscuta reflexa</i> Roxb.	Dodder, Akash bail, Amar bail	Parasitic herb	---	Ivory white	Feb-June	9930	10-02-08	Khalabat Township
	<i>Euphorbia falcata</i> L.	Sickle spurge	Herb	5-20cm	Yellowish green	April-June	10191	27-03-08	Khalabat
Euphorbiaceae	<i>Euphorbia helioscopia</i> L.	Sun spurge, Gandi buti, Chatri dodak	Herb	20-30 cm	Green	Dec-May	9777	24-02-05	Khalabat Township
	<i>Euphorbia hirta</i> L.	Asthma weed, Spurge, Dudhi	Herb	60cm	Purplish green	Sep-March	9749	23-12-04	Khalabat Township
	<i>Euphorbia heterophylla</i> L.	Cruel plant, Wild poinsettia, Lechosa	Herb	10-20 cm	Pinkish white	Sep-Dec	9752	18-01-05	Nursery, Khalabat Township
	<i>Euphorbia prostrata</i> Ait. Hort	Prostrate sandmat	Prostrate herb	20-30cm	Purple pink	Through out year	10008	22-07-08	Township
	<i>Ricinus communis</i> L.	Castor Bean, Arand	Shrub	5-10 m	Yellow, cream	Feb-Sep	9934	17-03-08	Hattar road

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	Vou. no.	Date	Sub-locality
Fumariaceae	<i>Fumaria indica</i> Hausskn. H.N. Pugsley	Pit-Papra, Berg-e-shahtra	Herb	10-40 cm	Pale pinkish	March-June	9793	08-03-05	Tarbela Road
Gentianaceae	<i>Centaurium pulchellum</i> (Swartz) Druce	Lesser centaury, Branched centaury	Herb	10-25 cm	White, pink-purple	March-June	9792	17-03-08	Khalabat Township
Lamiaceae	<i>Laminum amplexicaule</i> L. <i>Mentha arvensis</i> L.	Dead nettle, Henbit Peppermint, Podina	Herb	10-40 cm 20-50 cm	Purple-pink Pale lilac, white	Dec-April July-Sep	9753 9899	18-01-05 14-08-05	Tarbela Road Khalabat Township
Malvaceae	<i>Mentha longifolia</i> (Linn.) Huds.	Lamb mint, Chitta podina	Herb	1 m	Light purple, mauve, white	May-Nov	9900	14-08-05	Khalabat Township
Malvaceae	<i>Malva parviflora</i> Linn., Demonstr.	Least Mallow, Sonchal	Herb	60cm	White pinkish at tip	March-June	9820	02-04-05	Khalabat Township
Meliaceae	<i>Malvastrum coromendelianum</i> (Linn.) Gareke <i>Melia azedarach</i> L.	Sticky mallow Persian lilac, Bakayan, Darach	Herb	1m	Yellow	June-Sep	9882	29-06-05	Khalabat Township
Mimosaceae	<i>Acacia modesta</i> Wall. <i>Acacia nilotica</i> (Linn.) Delile	Phulai Acacia, Kikar	Tree	12m	Lilac, Purple	April-June	9839	12-05-05	Govt. Garden, Haripur city
Moraceae	<i>Broussonetia papyrifera</i> (L.) L'Herit. ex Vent. <i>Ficus benghalensis</i> L.	Paper mulberry, Gul toot, Jangli toot Banyan, Bar, Bargad	Tree	5-10 m 2-18 m 3-16 m	Yellow Yellow Whish hairy	March-April April-Sep March-Aug	9814 9939 9848	02-04-05 05-07-08 13-05-05	Hattar road Abbottabad road Abbottabad road
	<i>Ficus carica</i> L.	Fig, Injir, Kimri	Shrub	20-25 cm	Fruit pinkish red, hairy	April-July	9940	05-07-08	Pind Hasham Khan
	<i>Ficus palmata</i> Forssk.	Phagwara, Patguleri	Tree	5-9 m	Fruit yellow, purple hairy	May-Dec	9849	13-05-05	Hattar road
	<i>Morus alba</i> L.	White mulberry, Chita toot	Tree	10m	Fruit yellow brownish violet	May-Nov	9874	29-06-05	Hattar road
	<i>Morus nigra</i> L.	Black mulberry, , Shahtoot, Kala toot	Tree	20m	Fruit white	April-Sep	9867	15-06-05	Hattar road
Nyctangiaceae	<i>Boerhavia procumbens</i> Banks ex Roxb. <i>Mirabilis jalapa</i> L.	Isit, Wasao, Sentori 4 O'clock flower, Gul-e-abbasi	Herb	10m 20-100 cm 1.5 m	Dark purple-black Pink Purple, Yellow, white	March-July July-Sep Sep-Oct	9868 9918 9912	15-06-05 10-09-05 10-09-05	Hattar road Hattar road Govt. Garden, Haripur city

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	You. no.	Date	Sub-locality
Oxalidaceae	<i>Oxalis corniculata</i> L.	Khaatti buti	Creeping herb	5-20 cm	Yellow	March- Dec	9773	24-02-05	Khalabat Township
	<i>Oxalis pescaprae</i> L.	Yellow sorrel, Khatmit	Herb	2-24 cm	Yellow	Jan- April	9774	24-02-05	Khalabat Township
Papaveraceae	<i>Papaver hybridum</i> L.	Prickly-headed poppy	Herb	15-50 cm	Pink-red to crimson	April-June	9815	02-04-05	Khalabat Township
	<i>Papaver rhoeas</i> L.	Gul-e-lala	Herb	20-100 cm	Violet pink	Feb-July	9767	23-02-05	Tarbela Roadside field
Papilionaceae	<i>Lathyrus aphaca</i> L.	Sweet pea	Trailing herb	10-40 cm	Yellowish white	Feb-April	9776	24-02-05	Tarbela Roadside field
	<i>Medicago polymorpha</i> L.	Sinjee, Pishtaray	Herb	5-30 cm	Yellow	March-May	9785	07-03-05	Tarbela Roadside field
	<i>Melilotus indica</i> (Linn.) All.	Ran methi, Sinjee, Lewanai	Herb	15-60 cm	Yellow	March-Aug	9791	08-03-05	Tarbela Roadside field
	<i>Robinia pseudo-acacia</i> L.	Black locust, Vilayati kikar	Tree	20-30 m	Cream, whitish	March-April	9935	17-03-08	Along highway
	<i>Trifolium repens</i> L.	Shaftal	Herb	10-20 cm	White, Pinkish	April-July	9861	16-05-05	Tarbela Road
	<i>Vicia sativa</i> L.	Bakla	Herb	15-40 cm	Pale pink, white crimson, purplish violet	June-Aug	9875	29-06-05	Khalabat Township
Plantaginaceae	<i>Plantago major</i> L.	Greater plantain, Ghuzbe, Gul-Isaigol	Herb	20-50 cm	Greenish, Yellowish	Aug-Sep	9955	17-03-08	Khalabat Township
	<i>Plantago lanceolata</i> L.	Ribwort plantain, Purhat, Chmchi pattar, Ispaghol	Herb	30-60 cm	Greenish, Brownish	March-May	9817	02-04-05	Khalabat Township
Polygonaceae	<i>Polygonum plebejum</i> R.Br., Prodr	Knotweed, Machechi	Prostrate herb	10-30 cm	Green margins pink or white	March-July	9865	16-05-05	Khalabat Township
	<i>Rumex dentatus</i> L.	Dock, Sorrel, Ola	Herb	20-60 cm	Green	April-July	9869	15-06-05	Committee
Primulaceae	<i>Anagallis arvensis</i> L.	Jonkmari, Dhabbar	Prostrate herb	2-5 cm	Blue-Deep blue	Feb-March	9768	23-02-05	Committee
	<i>Androsace rotundifolia</i> Hardwieke	Arrowhead alpine	Herb	5-15 cm	White, pink	May-Aug	9876	05-07-08	Khalabat Township
Ranunculaceae	<i>Ranunculus arvensis</i> L.	Devil's claw, Corn butter cup, Chambul	Herb	10-50 cm	Yellow	March-May	9770	24-02-05	Khalabat Township

Table 1. (Cont'd.).

Family	Species	Vern. name	Habit	Height	Flower color	Flower/Fruit season	You. no.	Date	Sub-locality
	<i>Ranunculus muricatus</i> L.	Spiny fruited Butter cup, Crow foot	Herb	10-60 cm	Yellow	Feb-May	9769	23-02-05	Govt. Garden, Haripur city
Rhamnaceae	<i>Zizyphus mauritiana</i> Lam.	Indian jujube, Ber	Shrub	30 ft	Yellowish green	July-sep	9952	05-07-08	Hattar road
Rubiaceae	<i>Galium aparine</i> L.	Stick villy, Goose grass, Cleavers	Climbing herb	10-40 cm	White	March-May	9821	17-03-08	Khalabat
Sapotaceae	<i>Monothecca buxifolia</i> (Falc.) Dene.	Gurgura, Gargol	Thorny shrub	10 m	White	April-May	9863	17-03-08	Township Qazian
Scrophulariaceae	<i>Veronica anagallis-aquatica</i> L.	Blue water speed well	Herb	100cm	White, Pale blue or purple	March-Oct	9924	02-04-05	Khalabat Township
	<i>Veronica persica</i> Poir.	Persian speed well	Herb	10-20 cm	Blue	March-April	9816	17-03-08	Khalabat Township
Simaroubaceae	<i>Alanthus altissima</i> (Mill.) Swingle	Tree of Heaven, Jangli darach	Tree	30 m	Yellowish green	May-Aug	9883	29-06-05	High way
Solanaceae	<i>Datura stramonium</i> L.	Kala datura	Herb	60-120 cm	White	June-Aug	9951	05-07-08	High way
	<i>Solanum nigrum</i> L.	Kachmach, Mako	Herb	15-60 cm	White	Round the year	9807	23-03-05	Khalabat Township
	<i>Solanum pseudo-capsicum</i> L.	Jerusalem cherry	Shrub	90-120 cm	White	May-July	9894	07-07-05	Khalabat Township
	<i>Solanum surratense</i> Burm. F.	Kindiari, Muhakri	Herb	15mm	White	Through out the year	9808	28-03-05	Khalabat Township
Urticaceae	<i>Withania somnifera</i> (L.) Dunal	Asghand, Asghand nagori	Shrub	60-90 cm	Greenish, Yellow	Round the year	9771	24-02-05	Khalabat Township
	<i>Urtica pilulifera</i> L.	Roman nettle, Bichu booti	Herb	20-100 cm	Green	May-Sep	9913	10-09-05	Township Hattar road
Verbenaceae	<i>Lantana camara</i> L.	Panchphuli	Shrub	1-4 m	Orange, yellow turning to red	Throughout the year	9809	28-03-05	Hattar road
	<i>Verbena officinalis</i> L.	Karenta, Pamukh	Herb	25-100 cm	Pale pink, purplish	June-Dec	9750	23-12-04	Khalabat Township
	<i>Vitex negundo</i> L.	Nirgunda, Shiwari, Sambhaalo	Shrubs	1-2 m	Blue, Violet	Round the year	9751	18-01-05	Khalabat Township
Zygophyllaceae	<i>Tribulus terrestris</i> L.	Tirkundi, Gokhru, Bhakhra	Prostrate herb	10-40 cm	Yellow	Round the year	9925	08-11-05	Khalabat Township

Table 2. Checklist of cultivated plant species distributed in Haripur Hazara.

Species	Vou. No.	Species	Vou. No.	Species	Vou. No.
<i>Araucaria cunninghamii</i> Sweet, Hort. Brit	9758	<i>Bauhinia variegata</i> L.	9823	<i>Platanus orientalis</i> L.	9941
<i>Cupressus sempervirens</i>	9759	<i>Cassia fistula</i> L.	9897	<i>Grevillea robusta</i> A. Cunn. ex R. Br.	9811
<i>Thuja orientalis</i> L.	9760	<i>Lonicera japonica</i> Thunb., Fl. dap.	9825	<i>Punica granatum</i> L.	9856
<i>Cycas revoluta</i> Thunb. Fl. Jap	9761	<i>Spinacea oleracea</i> L.	9858	<i>Zizyphus jujuba</i> Mill.	9893
<i>Pinus roxburgii</i> Sargent	9786	<i>Momordica charantia</i> L.	9916	<i>Eriobotrya japonica</i> (Thunb.) Lindly	9917
<i>Allium cepa</i> L.	9870	<i>Euphobia milii</i> Ch. des Moulins	9953	<i>Malus pumila</i>	9836
<i>Allium sativum</i> L.	9841	<i>Mallotus philippensis</i> (Lam.) Muell. Arg.	9824	<i>Prunus americana</i>	9834
<i>Monstera deliciosa</i> Liebm. In Kjoeb.	9938	<i>Juglans regia</i> L.	9914	<i>Prunus domestica</i>	9818
<i>Aloe barbedensis</i> Mill. Gard	9756	<i>Salvia splendens</i> kerl.-Gawl.	9864	<i>Pyrus communis</i>	9772
<i>Bambusa arundinacea</i> (Retz.) Willd.	9987	<i>Abelmoscus esculantus</i> L. Moench	9915	<i>Rosa indica</i>	9902
<i>Hordeum vulgare</i> L.	9922	<i>Hibiscus rosa-sinensis</i> L.	9932	<i>Citrus aurantiifolia</i>	9800
<i>Triticum aestivum</i> L.	9787	<i>Malva sylvestris</i> L.	9895	<i>Citrus grandis</i>	9826
<i>Zea mays</i> L.	9926	<i>Malvaviscus arboreus</i> Cav., Diss.	9838	<i>Citrus limetta</i>	9860
<i>Celostia argentea</i> L.	9754	<i>Albizia lebbek</i> (L.) Benth.	9958	<i>Citrus limon</i>	9854
<i>Mangifera indica</i> L.	9828	<i>Eucalyptus camaldulensis</i> Dehnh.	9943	<i>Citrus medica</i>	9855
<i>Coriandrum sativum</i> Mill.	9827	<i>Eugenia jambolana</i> Lam.	9969	<i>Citrus paradisi</i>	9819
<i>Foeniculum vulgare</i> Mill.	9944	<i>Psidium guajava</i>	9919	<i>Citrus reticulata</i>	9788
<i>Beaumontia grandiflora</i> (Roxb.) Wall.	9810	<i>Bougainvillea glabra</i> Choisy	9909	<i>Citrus sinensis</i>	9764
<i>Catharanthus roseus</i> (Linn.) G. Don	9842	<i>Bougainvillea spectabilis</i> Willd.	9942	<i>Murraya paniculata</i>	9936
<i>Nerium oleander</i> L.	9890	<i>Jasminum grandiflorum</i> L.	9931	<i>Dodonaea viscosa</i> (L.) Jacq.	9790
<i>Thevetia peruviana</i> (Pers.) Schum.	9949	<i>Jasminum humile</i> L.	9885	<i>Capsicum annuum</i>	9852
<i>Calendula officinalis</i> L.	9933	<i>Jasminum officinale</i> L.	9884	<i>Capsicum frutescens</i> L.	9822
<i>Helianthus annuus</i> L.	9948	<i>Jasminum sambac</i> (Linn.) Ait.	9954	<i>Cestrum nocturnum</i> L.	9806
<i>Lactuca sativa</i> L.	9901	<i>Nyctanthes arbor-tristis</i> L.	9784	<i>Lycopersicon esculantum</i>	9903
<i>Tecoma stans</i>	9950	<i>Dalbergia sissoo</i> Roxb.	9784	<i>Solanum melnogeno</i>	9904
<i>Bombax ceiba</i> L.	9845	<i>Phaseolus vulgaris</i> L.	9889	<i>Duranta repens</i> L.	9923
<i>Brassica napus</i> L.	9780	<i>Pisum sativum</i> L.	9789	<i>Holmskioldia sanguinea</i>	9775
<i>Raphanus sativus</i> L.	9812	<i>Trigonella foenum-graecum</i> L.	9862	<i>Vitis vinifera</i>	9850

References

- Anonymous.1998. *District Census Report of Haripur*. Population Census Organization, Statistical Division, Government of Pakistan, Islamabad.
- Bamber, C.J. 1916. *Rosaceae in Plants of the Punjab*.
- Chopra, R.N. *et al.*, 1956. *Glossary of Indian Medicinal plants*. Council of Scientific & Industrial Research New Dehli.
- Hazrat, A., J. Shah, S. Ahmad, M. Nisar, A.K. Jan and Sikandar. 2010. Medicinal plants of Usheri valley Dir, N.W.F.P. Pakistan *Pak. J. Bot.*, 42(1): 31-34.
- Hooker, J.D. and B.D. Jackson (Thomus II K-Z) 1960. *Index Kewensis, An Enumuration of the genera and species of flowering plants*. 2. p: 428-429.
- Hussain, K. *et al.*, 2008. An ethnobotanical survey of important wild medicinal plants of hattar district haripur, Pakistan.
- Javid, K and T. Anjum 2005. *Parthenium hysterophorus* L. A Noxious Alien Weed. *Pak. J. Weed Sci. Res.*, 11(3-4): 81-87
- Lindsay, J. *et al.*, 1874. *The forest Flora of North-West and Central India*.
- Martin, W.K. 1969. *The concise Flora in color*.
- Mughal, M.S. 2006. *Compendium on scientific, local, English names*. Pakistan Forest Institute, Peshawar.
- Nasir, E. *et al.*, (Eds). 1970-2002. *Flora of Pakistan*. Fascicles 1-207.
- Nasir, Y.J. and R.A. Rafique. 1995. *Wild Flowers of Pakistan*. Oxford University Press, Karachi: 298.
- Nazim-ud-din 1983. *Al, Tax. Stud. Vas.Pl. Pak*: 95-96.
- Parker 1956. *A Forest Flora for the Punjab with Hazara and Dehli*. Ed. (3): 230.
- Polunin, O. and A. Stainton. 1986. *Flowers of the Himalaya" Scrophulariaceae*: 296-298.
- Quraishi. 1971. *Fl, Pesh. and Khyber Agency Vol.2. Pak. J. For.*, 22(3): 323-385.
- Shah, G.M. and M.A. Khan. 2006. *Check List of Medicinal Plants of Siran Valley Mansehra- Pakistan Ethnobotanical Leaflets*, 10: 63-71.
- Stewart, R.R. 1972. Asteraceae. In: Nasir and Ali, *Ann. Cat. Vas. Pl. W. Pak and Kash*. 726-729.
- Sultana, S. *et al.*, 2006. Indigenous Knowledge of Folk Herbal Medicines by the Women of District Chakwal, Pakistan Department of Plant Sciences, Quaid-i-Azam University Islamabad – *Paksitan Ethnobotanical Leaflets*, 10: 243-253.
- Swingle 1916. *Jour. Wash. Acad. Sc. Vi* p: 495.

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