Ethnobotanical analysis on the Campus of Govt. Degree College Rajouri (J&K), India.

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Abstract- The present study documented the ethnobotanical information of 104 plant species from Rajouri College Campus belonging to 90 genera and 35 families. Of these about 51 species are used as medicines, 45 species as practical, 45 species as fodder, 44 species as soil conservation, 39 species as fencing, 39 species as construction, 39 species as fuel, 31 species as agricultural implements, 25 species as ornamental, 25 species as shade, 22 species as furniture wood, 19 species as fruits, 16 species as vegetables and 7 species are used as spices. Moreover almost all enlisted species to have use in more than one ethnobotanical use category. This study is first of its kind on the diverse and comprehensive use of the campus flora.

Index Terms- College campus, Ethnobotany, Rajouri

I. INTRODUCTION

Rajouri is one of the hilliest districts of state Jammu and Kashmir [J&K] comprising of 2630 Km^2 area and is located between 70^0 and $74^0.4'$ east longitude and $32^0.58'$ and $33^0.35'$ north latitude. Rajouri, etymologically, is the land of Rajas (Kings). In the district, located along the Rajouri-Jammu national highway is a village known as Chingus. Historically this village is linked with the burial of Intestine of Jahangir (Mughal emperor) who died here during his return from Kashmir. Intensity of weather is noticeable from hot in plain and cool in Pir Panjal Mountains in the north. Temperature hardly exceeds 45^0C according to the metrological records. The population of the district has been estimated by the Govt. of India as 642415 souls (www.msmedijammu.gov.in) and half of the population of the Rajouri district is owned by the tribal communities known as Gujjars, Bakerwals and Baniharas. Gojri, Pahari, Kashmiri and Dogri are common languages of the Rajouri. Ethnobotany of Rajouri district with special reference to its medicinal uses of plants species has been previously published by (Sharma & Singh 1989; Nawchoo et al. 1994; Rashid and Anand (2007); Pant & Verma 2008; Rashid et al. 2008, 2013; Rashid 2012, 2013; Mahmood & Kadam 2012; Shah et al., 2012; Azad & Bhat 2013; Kumari et al. 2013; Shah et al.2015). There has been no ethnobotanical exploration on diverse uses of plant diversity growing within the campus of GDC Rajouri. Keeping this in mind we set out to investigate and capture the diverse ethnobotanical uses of plant diversity of this campus. Capturing the uses of plant species from a number of employees who belong to different ethnic groups is therefore a significant contribution to the documentation of indigenous knowledge on the diverse uses of plant resources in the Campus. Local inhabitants have high dependence on multipurpose floristic diversity of the campus not only for providing fuel wood, fodder, fruit and small timber but also for the treatment of many health related ailments.

II. STUDY AREA

The College campus is located on a small plateau towards the north of the District Headquarter. The Campus is spread over an area of almost 100 *kanals* (Kanal = 20marlas and one Marla = 272.25 square feet). The snow covered Pir-Panjal Mountains and lush green meadows and lakes (*sars*) of the middle Himalayas add splendid look to its natural picturesque. The campus is surrounded from all side by scattered residential and commercial houses and shops. Because of its wide spread area, the college campus harbours different variety of in-situ and ex-situ plant species which are being used by the employees, students and other people who are associated with this College directly or indirectly for variety of purposes (Figure 1).

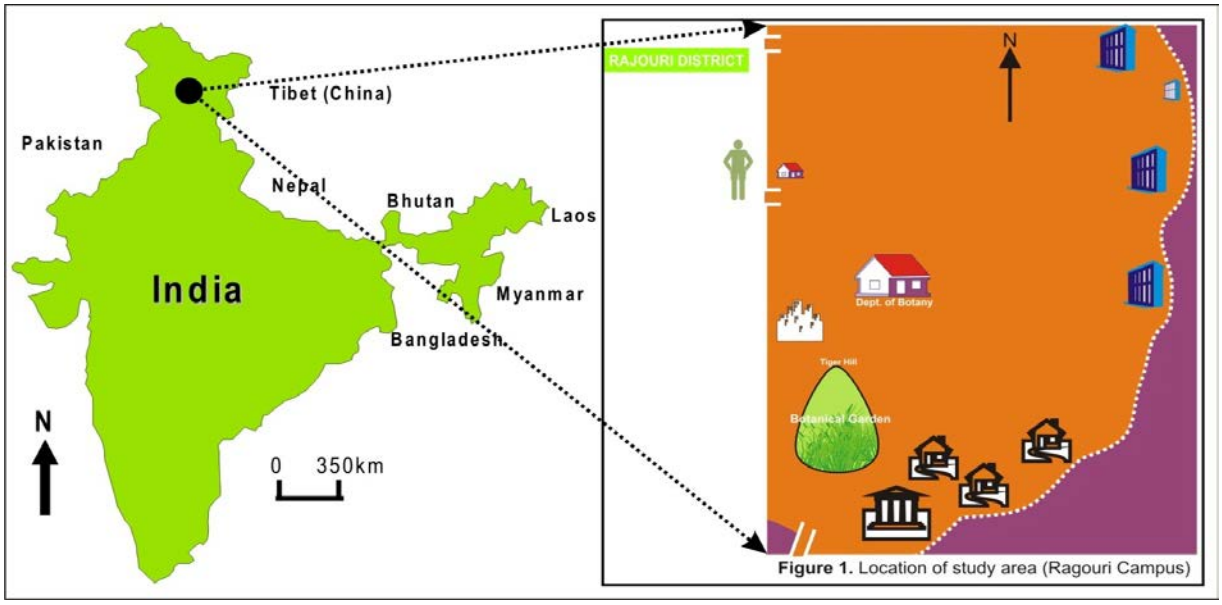

Figure 1: Map of Study area [Rajouri Campus, J&K, India]

III. MATERIALS AND METHODS

Campus area was surveyed during May 2014-April 2015 to document ethnobotanical information on the uses of both wild and cultivated floristic diversity. A total of 70 informants were interviewed (49% of the total college's employees) but only 50 (35%) provided information on variety of uses of plants, included both male and female with age group from 22-52 year old (Table 1) and (Figure 2). The ethnobotanical information was collected through semi-structured interview and questionnaire. The plants specimens, collected from the campus were photographed, dried, preserved and identified with the available floristic literature Sharma & Kachroo, 1983; Swami & Gupta; Bhellum & Magotra, 2012; Malik et al., 2010; Dar et al., 2014..

IV. RESULTS AND DISCUSSION

The ethnobotanical interviews resulted in the documentation of 104 plant species, distributed across 35 families and 90 genera, used under different ethnobotanical categories. Of these 102 plants were angiosperm and 1 belonged to each of Gymnosperm and Pteridophytes. The ethnobotanical use of plants along with family, growth form are given in Table 2 and Figure 3. The ethnobotanical informations showed that all the 104 species were locally used for various purposes. They include 51 species as medicines, 45 species as practical, 45 species as fodder, 44 species as soil conservation, 39 species as fencing, 39 species as construction, 39 species as fuel, 31 species as agricultural implements, 25 species as ornamental, 25 species as shade, 22 species as furniture wood, 19 species as fruits, 16 species as vegetables and 7 species as spices (Figure 4). The interaction between plant and humans is very strong and can never be disassociated as the dependence is indispensable. In the present study conducted in the college campus, it was observed through interviews that people in and around this campus use native plants for acquiring their basic household requirements such as medicine, fuel, fruit, fodder, forage, vegetable, furniture, roof thatching and agriculture tools like Plough (*hal*), Yoke (*gungla*), handle for shovel (*Belcha*), hoe (*Kaie*), sickle (*Drati*), axes (*kulahri*), saw (*aree*) and earth rake (*dandali*) etc.. Many medicinal plant species which have been cultivated under "ex-situ conservation drive" initiated by the Department of Botany in the campus were growing well under natural habitats at higher altitude and in the low land as well; these medicinally important species are *Acorus calamus, Ajuga bracteosa, Allium cepa, Cichorium intybus, Fumaria indica, Equisetum arvense, Phyllanthus emblica, Plantago major, Rubia cordifolia, Taraxacum officinale, Bergenia ciliate* and *Zanthoxylum armatum*. Overexploitation of these species by locals, hidden collectors and drug dealers has drastically decreased the species richness in their natural habitats. Ethnobotanical use categories revealed that a major proportion of plant species (51/104) were used for medicines such as *Achillea millefolium, Acorus calamus, Fumaria indica, Nerium oleander, Taraxacum officinale, Ocimum basilicum, Phyllanthus emblica, Plantago major, Viburnum grandiflorum* etc. The findings agree with (Rashid & Anand 2007; Rashid et al. 2008; Pant & Verma, 2008; Rashid 2012, 2013; Azad & Bhat 2013; Shah et al. 2015) in this respect. The next major used categories of plants were fodder and practical purposes (45 each). Our findings are similar to Rashid & Sharma, 2012 and Amajad et al., 2015. A large number of important medicinal plant species die every year before they attain their full life cycle during the period when heavy numbers of students from within the campus or outside, gather for fee deposit or filling up their examination or scholarship forms since they seek free entry into the protected area for ex-situ plant species. A few years back a heavy "Tree-Cut" operation was conducted in the campus on the behest of some College officials that has lead to the creation of barren areas. This operation has killed and cut more than 80 fully matured tree species like *Morus alba, Ficus palmata, Eucalyptus alba* and *Populus ciliata* and auctioned them for a meagre amount.

Figure 2: Photographs of plants [1-4] and some local fund employees [5] working in the Herbal Garden of the Campus

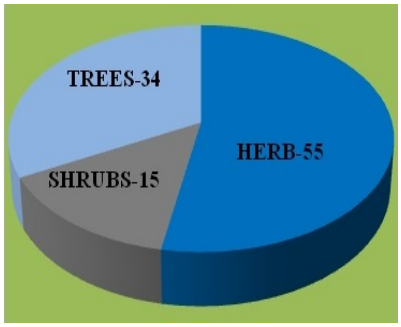

Figure 3: Classification of plants on the basis of their growth forms.

V. Conclusion

The heavy annual influx of the students in Sciences, Arts and in other outdoor courses causes drastic decrease of various important campus floras due to the lack of scientific attitude of conservational strategies. It is an urgent need to create awareness through Class room lectures, Seminars, NSS and NCC cadets' awareness programmes about the usefulness of the floristic

diversity in and around the Campus. Cultivation of Threatened plants should be encouraged among medical students on marks-oriented basis. The Zoology department should be made a part of the College plantation derive so that the resources could be conserved and preserved as a future refuge for many animals, birds and reptiles needed for practical classes.

ACKNOWLEDGEMENTS

The authors wish to thank the informants especially the local fund employees who work in the Campus for their participation in documentation of this ethnobotanical information on the College Campus's floristic diversity. I (first author) also wish to acknowledge the kind hospitality and valuable contributions of the entire faculty in the Department of Botany, GDC Rajouri during this field studies.

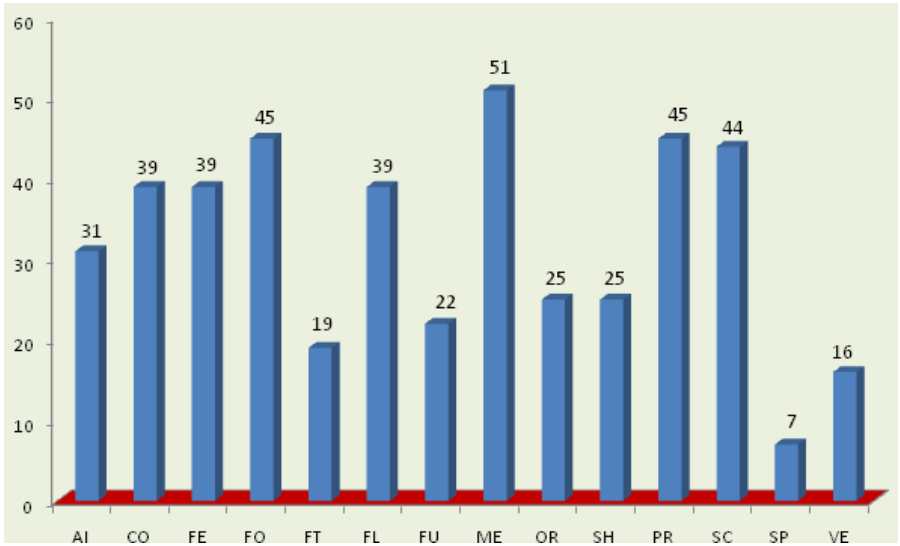

Figure 4: Ethnobotanical use of plants in different categories in Rajouri Campus [J&K], India

AI: Agriculture Implement; **CO**: Construction; **FE**: Fencing; **FO**: Fodder; **FT**: Fruit; **FL**: Fuel; **FU**: Furniture; **ME**: Medicine; **OR**: Ornamental; **SH**: Shade; **PR**: Practical; **SC**: Soil Conservation; **SP**: Spices; **VE**: Vegetable

Table 1: Socio-demographic characteristics of the informants

Characteristic	Parameter		No. of informants (Employees)
Age	18-25		20
	26-30		10
	31-40		11
	41-50		6
	51-60		3
Gender	Male		44
	Female		6
Ethnicity	Muslim	Gujjar	22
		Kashmiri	20
	Sikh		2
	Hindu		6
Marital Status	Married		30
	Unmarried		19
	Widow		1
	Transgender		-
Education	None		3
	Primary		10
	Secondary		15
	Tertiary		20
	Ph.Ds		5
Employment	Professors		10
	Contr. Lecturers		15

	Technician	2
	Clerical	6
	Local fund	17
Monthly income	Rs.40000-80000	12
	Rs.8000-22000	10
	Rs.1000-4000	28

Table 2: Ethnobotanical uses of Plant diversity growing in [in-situ and ex-situ] in the Rajouri Campus

Botanical Name; [Family]	Family Name	Voucher Number	Growth Form	Growth Status	Ethnobotanical Uses														Part Used
					Ag. implement	construction	Fencing	Fodder, Fora ge	Fruit	Fuel / Coal	Furniture	Medicine	Ornament	Shade plant	Practical	S. conservation	Spices	Vegetable	
Achillea millefolium L.	Asteraceae	DCR2401	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp
Achyranthes aspera L.	Amaranthaceae	DCR2402	H	W	-	-	-	+	-	-	-	-	-	-	-	-	-	-	Wp
Acorus calamus L.	Acoraceae	DCR2403	H	C	-	-	-	-	-	-	-	+	+	-	-	+	-	-	Rh
Ageratum conyzoides (L.) L.	Asteraceae	DCR2506	H	W	-	-	-	+	-	-	-	+	-	-	+	+	-	-	Wp
Ajuga bracteosa Wall. ex Benth.	Lamiaceae	DCR2404	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp
Ajuga parviflora Benth.	Lamiaceae	DCR2405	H	W	-	-	-	+	-	-		+	-	-	-	-	-	-	Wp
Albizia lebbeck (L.) Benth.	Leguminosae	DCR2406	T	W	+	+	-	+	-	+	+	-	-	+	-	+	-	-	Wd;Lv
Allium cepa L.	Amaryllidaceae	DCR2407	H	C	-	-	-	-	-	-	-	+	-	-	+	-	+	+	Wp
Allium sativum L.	Amaryllidaceae	DCR2408	H	C	-	-	-	-	-	-	-	+	-	-	+	-	+	+	Wp
Anagallis arvensis L.	Primulaceae	DCR2409	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp
Apium graveolens L.	Apiaceae	DCR2411	H	C	-	-	-	-	-	-	-	+	-	-	-	-	+	+	Wp
Araucaria heterophylla (Salisb.) Franco	Araucariaceae	DCR2412	T	C	-	-	-	-	-	+	-	-	+	- -	-	-	-	-	Wp
Bambusa nutans Wall. ex Munro	Poaceae	DCR2413	S	C	+	+	+	-	-	+	+	-	+	-	-	+	-	-	Wd

Bauhinia variegata L.	Fabaceae	DCR2414	T	N	+	+	+	+	-	+	+	+	-	-	-	+	-	+	Wd; Lv; Fl
Bergenia ciliata (Haw.) Sternb.	Saxifragaceae	DCR2415	H	C	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Rt
Bidens chinensis (L.) Willd.	Asteraceae	DCR2416	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	-	Wp
Bougainvillea spectabilis Willd.	Nyctaginaceae	DCR2417	S	C	+	+	+	-	-	+	-	-	+	-	+	-	-	-	Wp
Brassica juncea (L.) Czern.	Brassicaceae	DCR2418	H	C	-	-	-	+	-	-	-	-	-		+	-	-	+	Wp; Sd; Ol
Brassica rapa L.	Brassicaceae	DCR2419	H	C	-	-	-	+	-	-	-	-	-	-	+	-	-	+	Wp; Sd; Oil
Buxus wallichiana Baill.	Buxaceae	DCR2420	T	C	+	+	-	+	-	+	+	-	-	-	-	+	-	-	Wd;Lv
Callistemon citrinus (Curtis)Stapf	Myrtaceae	DCR2421	T	C	+	+	+	-	-	+	-	-	+	+	+	+	-	-	Wd;Fl
Canna indica L.	Cannaceae	DCR2422	H	C	-	-	-	-	-	-	-	-	+	-	+	+	-	-	Fl
Cannabis sativa L.	Cannabaceae	DCR2423	H	W	-	-	-	-	-	-	-	+	-	-	+	-	-	-	Wp; Sd;
Capsella bursa-pastoris (L.) Medik	Brassicaceae	DCR2424	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	-	Wp
Cassia occidentalis L.	Caesalpinaceae	DCR2425	S	C	-	-	+	-	-	-	-	-	+	+	+	-	-	-	Wd; Lv; Fl.
Celtis australis L.	Ulmaceae	DCR2426	T	W	+	+	-	-	-	-	-	-	-	+	-	+	-	-	Wd;Lv
Cestrum nocturnum L.	Solanaceae	DCR2428	S	C	-	-	-	-	-	-	-	-	+	-	+	-	-	-	Fl
Chenopodium album L.	Chenopodiaceae	DCR2429	H	W	-	-	-	-	-	-	-	-	-	-	-	-	-	+	Wp;Lv
Cichorium intybus L.	Asteraceae	DCR2430	H	W	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Wp;Lv
Cirsium arvense (L.);	Asteraceae	DCR2431	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	-	Wp
Cirsium falconeri (Hook. f.)	Asteraceae	DCR2432	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	-	Wp
Coriandrum sativum L.	Apiaceae	DCR2433	H	C	-	-	-	-	-	-	-	+	-	-	+	-	+	+	Wp;Lv

Coriandrum sativum L.	Apiaceae	DCR2434	H	C	-	-	-	-	-	-	-	-	+	-	+	-	+	+	Wp; Lv; Ft
Cupressus torulosa D. Don	Cupressaceae	DCR2435	T	C	-	-	-	-	-	-	-	-	+	-	-	-	-	-	Wd
Cycas circinalis L.	Cycadaceae	DCR2436	T	C	-	-	-	-	-	-	-	-	+	-	+	-	-	-	Wp
Cynodon dactylon (L.) Pers.	Poaceae	DCR2507	H	W	-	-	-	+	-	-	-	+	-	-	+	+	-	-	Wp
Dodonaea viscosa (L.) Jacq.	Sapindaceae	DCR2437	S	C	-	+	+	+	-	+	-	-	-	-	-	+	-	-	Wp
Duchesnia indica (Andr.) Focke	Rosaceae	DCR2438	H	W	-	-	-	+	+	-	-	+	-	-	+	-	-	-	Wp;Lv
Equisetum arvense L	Equisetaceae	DCR2439	H	W	-	-	-	-	-	-	-	+	-	-	+	-	-	-	Wp
Eucalyptus alba Reinw. ex Bl.	Myrtaceae	DCR2440	T	C	+	+	+	-	-	+	+	-	-	+	-	+	-	-	Wd
Euphorbia elastica Jum.	Euphorbiaceae	DCR2441	T	C	-	-	-	-	-	-	-		+	-	-	-	-	-	Wp
Euphorbia helioscopia L.	Euphorbiaceae	DCR2442	H	W	-	-	-	-	-	-	-		-	-	+	-	-	-	Wp; Fl
Euphorbia hispida Boiss.	Euphorbiaceae	DCR2443	H	W	-	-	-	-	-	-	-		-	-	+	-	-	-	Wp; Fl
Euphorbia royleana Boiss.	Euphorbiaceae	DCR2444	T	C	-	-	-	-	-	-	-	+	-	-	-	-	-	-	St
Ficus palmata Forssk.	Moraceae	DCR2445	T	W	-	+	+	+	+	+	-	+	-	+	+	+	-	-	Wd;Lv; Ft
Ficus religiosa L.	Moraceae	DCR2446	T	W	+	+	+	+	+	+	+	+	-	-	-	+	-	-	Wd; Lv; Ft
Foeniculum vulgare Mill.	Apiaceae	DCR2447	H	C	-	-	-	-	+	-	-	+	-	-	+	-	+	+	Wp ; Lv; Lt
Fragaria chiloensis (L.) Mill.	Rosaceae	DCR2448	H	C	-	-	-	-	+	-	-	-	-	-	-		-	-	Ft
Fumaria indica (Haussk.) Pugsley	Fumariaceae	DCR2449	H	W	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Wp;Lv
Galium aparine L.	Rubiaceae	DCR2508	H	W	-	-	-	+	-	-	-	+	-	-	+	+	-	-	Wp
Geranium rotundifolium L.	Gentianaceae	DCR2450	H	W	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Wp;Rt

Grevillea robusta A.Cunn. ex R.Br.	Proteaceae	DCR2451	T	C	+	+	+	-	-	+	+	-	+	+	-	+	-	-	Wd
Grewia optiva J.R.Drumm. ex Burret	Tiliaceae	DCR2452	T	W	+	+	+	+	-	+	-	-	-	+	-	+	-	-	Wd;Lv
Helianthus annuus L.	Asteraceae	DCR2453	H	C	-	-	-	+	-	-		+	+	-	+	-	-	-	Fl
Hibiscus rosa-sinensis L.	Malvaceae	DCR2454	S	C	-	-	-	-	-	-	-	-	+	-	+	-	-	-	Fl
Hippeastrum striatum (Lam.) H.E.Moore	Amaryllidaceae		H	C	-	-	-	-	-	-	-	-	+	-	+	-	-	-	Fl
Indigofera heterantha Wall. ex Brandis	Papilionaceae	DCR2455	S	W	-	+	+	+	-	+	-	-	-	-	-	+	-	-	Wd
Iris milesii Baker ex Foster	Iridaceae	DCR2456	H	C	-	-	-	-	-	-	-	+	+	-	+	-	-	-	Rt; Fl
Justicia adhatoda L	Acanthaceae	DCR2457	S	W	-	+	+	-	-	+	-	+	+	-	+	+	-	-	Lv; Fl
Lamium amplexicaule L.	Lamiaceae	DCR2458	H	W	-	-	-	+	-	-	-	-	-	-	-	-	-	+	Wp;Lv
Lathyrus aphaca L.	Papilionaceae	DCR2459	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	+	Wp; Fl
Malvastrum coromandelianum (L.) Garcke	Malvaceae	DCR2460	H	W	-	-	-	-	-	-	-	-	-	-	+	-	-	-	Wp
Medicago polymorpha L.	Papilionaceae	DCR2461	H	W	-	-	+	-	-	-	-	-	-	-	-	-	-	-	Wp
Melia azadirachta L.	Meliaceae	DCR2462	T	W	+	+	+	+		+	+		-	+	+	+	-	-	Wd;Lv Ft;WP
Mentha longifolia (L.) L.	Lamiaceae	DCR2463	H	C	-	-	-	+	-	-	-	-	-	-	+	-	-	+	Lv
Morus alba L.	Moraceae	DCR2464	T	W	+	+	+	+	+	+	+	+		+	+	+	-	-	Wd;Lv; Ft;
Morus nigra L.	Moraceae	DCR2465	T	W	+	+	+	+	+	+	+	-	-	+	-	+	-	-	Wd; Lv; Ft;
Nerium oleander L.	Apocynaceae	DCR2466	S	C	-	+	+	-	-	+	-	+	+	-	+	+	-	-	Tg
Ocimum basilicum L.	Lamiaceae	DCR2467	H	C	-	-	-	-	+	-	-	+	-	-	+	-	+	+	Wp; Sd
Olea ferruginea Royle	Oleaceae	DCR2468	T	C	+	+	+	+	-	+	+	+	-	+	-	+	-	-	Wd ;Ft
Papaver somniferum L.	Papaveraceae	DCR2469	H	C	-	-	-	-	+	-	-	+	+	-	+	-	-	+	Wp ; Lv; Sd

Phyllanthus emblica L.	Phyllanthaceae	DCR2470	T	C	+	+	+	-	+	+	+	+	+	+	+	+	-	-	Wd; Lv; Ft
Pinus roxburghii Sarg.	Pinaceae	DCR2471	T	W	+	+	+	-	-	+	+	+	+	+	+	+	-	-	Wd ; Lv; Rn
Plantago lanceolata L.	Plantaginaceae	DCR2472	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp;
Plantago major L.	Plantaginaceae	DCR2473	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp;Rt
Platanus orientalis L	Platanaceae	DCR2474	T	C	+	+	+	-	-	+	+	-	+	-	-	+	-	-	Wd;Lv
Polygonum affine D. Don	Polygonaceae	DCR2476	H	C	-	-	-	+	-	-	-	+	-	-	-	-	-	-	Wp; Rh
Populus ciliata Wall. ex Royle	Salicaceae	DCR2477	T	C	+	+	+	+	-	+	+	-	-	+	-	+	-	-	Wd;Lv
Prunus armeniaca L.	Rosaceae	DCR2478	T	C	+	+	+	+	+	+	+	-	-	+	+	+	-		Wd;Ft
Pterospermum acerifolium (L.) Willd	Malvaceae	DCR2480	T	C	+	+	+	-	-	+	+	-	-	+	-	+	-	-	Wd
Pyrus communis L.	Rosaceae	DCR2481	T	C	+	+	-	+	+	+	+	+	-	+	-	+	-	-	Wd;Ft; Lv
Pyrus pashia Buch.-Ham. ex D.Don	Rosaceae	DCR2482	T	W	+	+	+	+	+	+	+	+	-	+	-	+	-	-	Wd;Ft; Lv
Quercus oblongata D.Don	Fagaceae	DCR2483	T	C	+	+	+	+	-	+	-	+	-	+	-	+	-	-	Wd; Lv; Ft
Ranunculus arvensis L.	Ranunculaceae	DCR2484	H	W	-	-	-	+	-	-	-	-	-	-	-	-	-	-	Wp
Rosa indica L.	Rosaceae	DCR2485	H	C	-	-	-	+	-	+	-	+	+	-	+	+	-	-	Fl
Rubia cordifolia L.	Rosaceae	DCR2486	H	W	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Wp
Rubus ellipticus Sm.	Rosaceae	DCR2487	S	W	-	-	+	+	+	+	-	-	-	-	-	+	-	-	Wp;Ft
Rumex nepalensis Spreng	Polygonaceae	DCR2488	H	W	-	-	-	+	-	-	-	+	-	-	-	-	-	+	Wp
Salix tetrasperma Roxb.	Salicaceae	DCR2489	T	W	+	+	+	+	+	+	-	-	-	+	-	+	-	-	Wd;Lv.
Sarcococca saligna Müll.Arg.	Buxaceae	DCR2490	S	C	-	+	-	-	-	-	-	-	+	-	-	+	-	-	Wp
Saussurea heteromalla (D. Don) Hand.-Mazz	Asteraceae	DCR2491	H	W	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Wp
Skimmia laureola Franch.	Rutaceae	DCR2492	S	C	-	-	-	-	-	-	-	+	-	-	-	-	-	-	Lv
Sonchus arvensis L.	Asteraceae	DCR2493	H	W	-	-	-	+	-	-	-	-	-	-	+	-	-	-	Wp
Stellaria media (L.) Vill.	Caryophyllaceae	DCR2494	H	W	-	-	-	+	-	-	-	-	-	-	-	-	-	-	Wp

Syzygium cumini (L.) Skeels	Myrtaceae	DCR2495	T	W	+	+	+	-	+	-	-	+	-	+	-	-	-	-	Wd; Lv; Ft
Taraxacum officinale Weber	Asteraceae	DCR2496	H	W	-	-	-	+		-	-	+	-	-	+	-	-	+	Wp
Tectona grandis L.f.	Lamiaceae	DCR2497	T	W	+	+	+	-	-	+	+	-	-	+	-	+	-	-	Wd;Lv
Toona ciliata M.Roem.	Meliaceae	DCR2498	T	W	+	+	+	-	-	+	+	-	-	+	-	+	-	-	Wd;Lv
Toona sinensis (Juss.) M.Roem.	Meliaceae	DCR2499	T	W	+	+	+	-	-	+	+	-	-	+	-	+	-	-	Wd;Lv
Trifolium fragiferum L.	Papilionaceae	DCR2500	H	W	-	-	+	-	-	-	-	-	-	-	-	-	-	-	Wp
Trifolium repens L.	Papilionaceae	DCR2501	H	W	-	-	+	-	-	-	-	-	-	-	-	-	-	-	Wp
Viburnum grandiflorum Wall. ex DC.	Capparaceae	DCR2502	S	C	+	+	+	+	+	+	-	+	-	-	-	+	-	-	Wd;Lv
Vitex negundo L.	Lamiaceae	DCR2505	S	W	-	+	+	+	-	+	-	+	-	-	+	+	-	-	Wd;Lv
Zanthoxylum armatum DC.	Rutaceae	DCR2503	S	C	+	+	+	-	+	+	-	+	-	-	-	+	+	-	Wd;Ft
Zizyphus mauritiana Lam	Rhamnaceae	DCR2504	T	C	-	+	+	+	+	+	-	+	-	-	-	+	-	-	Bk; Ft

Abbreviation: Bk; **Bark,** Ft; **Fruit,** Fl; **Flower,** Lv; **Leaves,** Rn; **Resin,** Rh; **Rhizome,** Rt; **Root,** Sd**; Seed,** St; **Stem,** Tg; **Twig,** Wd**; Wood,** Wp **(Whole plant),** W; **Wild,** C; **Cultivated,** H; **Herb,** S; **Shrub,** T; **Tree,** Ag. Implement**; Agriculture implement.**

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