

SYNOPTIC ANALYSIS OF FABACEAE S.L. (LEGUMINOSAE) OF SOME AREAS OF DISTRICT RAJOURI (J&K), INDIA

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Abstract: The present communication deals with the documentation of members of family fabaceae from three tehsils of district Rajouri (J&K), India. A total of 51 species have been collected from the study area.

Keywords: Blotters, Fabaceae, Legume, Mimosoideae, Voucher number

INTRODUCTION

The state of Jammu and Kashmir lies between the coordinates 32°17' and 36°58' North Latitudes and 73°26' and 80°30' East Longitudes. It covers an area of 2,22,236 Km² and an altitudinal variation of 300-6500m above mean sea level.

The variations in the climate are from tropical, subtropical to alpine, the annual precipitation ranges between 107-650 mm, with an average of 600 mm of snow during winter. The temperature fluctuates between 15°C to 43°C during summer and between -3°C to 26°C in winter. Compilation by various authors has shown several legume species growing wild here. Last compilation on Indian legumes by Sanjappa (2010) puts on record 179 genera and 1152 species. Out of these, 36 genera and 80 species of leguminosae are listed in the "Flora of Jammu" by Sharma and Kachroo (1981). 28 legume species find place in "Weed Flora of Kashmir valley" by Kaul (1986). Bhellum and Magotra (2012) in "A catalogue of Flowering plants of Doda, Kishtwar and Ramban districts" mention 70 genera of Papilionoideae, 4 genera of Caesalpinoideae and 4 genera of Mimosoideae. Legume flora of several areas remains unexplored. Rajouri district of the state covering an area of 2630 km², lying between 30°50' N to 33°30' N longitude and 74°E to 74°10' E latitude is one such region. This area has a wide altitudinal range of 490-4700m and harbours great floral diversity. No comprehensive work is however available on the legumes of this area except for "Climbing weeds of Agricultural crops of District Rajouri, J&K, India" (2012), by Dangwal and Singh mentions 4 legume species and "Dye yielding Plant Diversity of district Rajouri, J&K, India" by Rashid (2013) also mentions 9 legume species. Present work was designed to explore the legume diversity of the region.

MATERIAL AND METHOD

Periodic field trips were undertaken in rural and mountainous areas of the study area (all the three tehsils, namely Sunderbani, Nowshera and

Rajouri). Trips to distant parts were of the duration of 3 to 7 days each. Same site was visited in different seasons of the year so as to raise collections in all seasons of the year. While collecting specimens, voucher numbers were allotted to each specimen and details were entered in the field notebook. Field data collected for every specimen included local name, date of collection, place of collection, altitude, voucher number, flower colour, fragrance, soil characters and other such characters which are not retained on pressing. Herbaceous plants were collected as whole, for others, tender flower and fruit bearing twigs were selected and cut with the help of pruning knife or secateurs. The plants collected were pressed in old newspapers and blotters. The press was locked up for about 24 hours. Thereafter it was opened and blotters changed. Wherever necessary, plant press were rearranged to bring them to desired position. The process of changing blotters was done after every 24-36 hours for 3-4 days to reduce discolouration of foliage and flowers and to avoid rotting. In summer months, the process of drying took 4-6 days while during winters, it extended to 6-11 days.

RESULT AND DISCUSSION

51 species of family Fabaceae abounding three tehsils of district Rajouri of J&K state, India were enumerated from the area (Table 1) and form the collection of the present survey. Covering an altitudinal gradient of 426-1015 msl and known by different local names, these taxa were found to reproduce sexually. These bear different coloured flowers. Some important aspects like distribution, habit, flower colour, flowering and fruiting period and place of collection (along with altitude) of these species are summarised in the table 1. Subfamily papilionoideae is most dominant one in the collection being represented by 23 genera and 36 species constituting 70.58 % of the total sample. Members of the subfamilies Caesalpinoideae and Mimosoideae occur almost in equal distribution. Caesalpinoideae is represented by 3 genera and 8 species representing

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15.68 % of total species count while Mimosoideae is represented by 4 genera and 7 species constituting 13.73% of the total species count. Most of the legumes encountered during present survey are

herbs. These constitute 55% (28 species) of the total collection. Trees and shrubs are less represented and form 23.53 (12 species) and 21.57 % (11 species) of the total samples size.

Table 1. List of species collected from the study area

S.N.	Name of species	Common name	Local name	Flower colour	Flowering and fruiting period	Specimen collected from	Altitude (msl)
01	<i>Abrus precatorius</i> L.	Indian liquorice	Ratti	Pink	August-October	Khori (Rajouri)	863
02	<i>Argyrobolium roseum</i> (Cambess.) Jaub & Spach	Makhan Booti	Hazardani, Bahu Phalli\	White	March-September	Chanmari (Rajouri)	924
03	<i>Astragalus leucocephalus</i> Bunge	-	Pattri	White with a little yellow tinge	March-May	Palulian (Rajouri)	1015
04	<i>Atylosia scarabaeoides</i> (L.) Benth.	Wild Kulthi	Sayali	Yellow	May-October	Agrati (Rajouri)	796
05	<i>Butea monosperma</i> (Lam.) Taub	Flame of the Forest	Kaag-ka-boota, Kinji	Orange Red	March-May	Kallar (Rajouri)	825
06	<i>Caragana gerardiana</i> Royle ex Benth.	-	Pattaki	Yellow	April-June	Dassal (Rajouri)	946
07	<i>Crotalaria medicaginea</i> Lam.	Trefoil Rattlepod	Kuuchni	Yellow with a reddish tinge	April-September	Dassal (Rajouri)	985
08	<i>Crotalaria mysorensis</i> Roth.	Siberian Pea shrub	Chitryavalli	Yellow	August-September	Peelo Galla (Rajouri)	912
09	<i>Crotalaria prostrata</i> Willd.	Prostrate Rattlepod	-	Yellow	March-May	Kopra (Rajouri)	990
10	<i>Dalbergia sissoo</i> (Roxb.)	Mysore Rattlepod	Shisham, Talli	Creamy white	March-May	Kangri (Nowshera)	503
11	<i>Desmodium gangeticum</i> (L.) DC.	Sal-leaved Desmodium	-	Pink	April-October	Dharwali Bawli (Rajouri)	935
12	<i>Desmodium laxiflorum</i> DC.	Linear-leaved tick-trefoil	Baboori kuuchni	Blue and white	July-September	Sema Chawa (Rajouri)	945
13	<i>Desmodium triflorum</i> (L.) DC.	3-flowered Beggar Weed	Jangli methi	Blue	May-July	Gaian (Rajouri)	922
14	<i>Eriosema himalaicum</i> H. Ohashi	Chinese bush Carrot	-	Yellow	July-September	Muradpur (Rajouri)	986
15	<i>Gueldenstaedtia verna</i> (Georgi) Boriss	Asian tiger mosquito	-	Whitish blue	April-July	Dharwali Bawli (Rajouri)	985
16	<i>Indigofera hebetata</i> Ali	Fuzzy petal Indigo	-	Pink	May-September	Fatehpur (Rajouri)	969
17	<i>Indigofera heterantha</i> Wall.	Cool Indigo	Kathi	Pink	May-August	Muradpur (Rajouri)	936
18	<i>Indigofera linifolia</i> (L.f.) Retz.	Pandharphali	-	Pink	May-October	Kangala (Rajouri)	994
19	<i>Indigofera tinctoria</i> L.	Nili	Kathi	Pink	March-May	Saranoo (Rajouri)	885

20	<i>Lathyrus aphaca</i> L.	Yellow vetchling	Bandkla, Janglimatt ar	Creamy white	March-April	Kallar (Rajouri)	847
21	<i>Lespedeza juncea</i> (L.f.) Persoon	Bush clover	-	White with purple tinge	April-September	Chingus (Rajouri)	796
22	<i>Lotus corniculatus</i> L.	Bird's foot trefoil	-	Yellow	April-July	Palam (Rajouri)	879
23	<i>Medicago lupulina</i> L.	Black Hay	Sariri	Yellow	March-May	Siot (Sunderbani)	426
24	<i>Medicago polymorpha</i> L.	California burclover	Sariri, Khitmi	Yellow	March-May	Sunderbani	449
25	<i>Melilotus indica</i> (L.) All.	Indian Sweet clover	Barseem	Yellow	March-May	Dhanidhar (Rajouri)	918
26	<i>Rhynchosia minima</i> (L.) DC.	Burn-mouth-vine	Jangli Moath	Yellow	June-August	Dharwali Bawli (Rajouri)	963
27	<i>Robinia pseudoacacia</i> L.	Black Locust	Kikar	CreamyWhite	March-May	Khandali (Rajouri)	911
28	<i>Tephrosia purpurea</i> (L.) Pers.	Wild Indigo	Sirphonka	Pink	March-May	Dabura (Nowshera)	499
29	<i>Trifolium alexandrinum</i> L.	Barseem clover	Barseem	Creamy white	March-April	Banja Bain (Sunderbani)	549
30	<i>Trifolium campestre</i> Schreb.	Low Hop Clover		Yellow	February-April	Dassal (Rajouri)	946
31	<i>Trifolium pratense</i> L.	Red clover	Shattal	Pink	April-June	Agrati (Rajouri)	785
32	<i>Trifolium repens</i> L.	White clover	Jangli Shattal	Creamywhite with a brownish tinge	March-April	Baja bain (Sunderbani)	537
33	<i>Trifolium resupinatum</i> L.	Persian clover	Shatala	Pink	April-June	Agrati (Rajouri)	801
34	<i>Uraria picta</i> (Jacq.) DC.	Shankaraja	-	White and pink	August-September	Muradpur (Rajouri)	905
35	<i>Vicia hirsuta</i> (L.) Gray	Tiny vetch	Papda	White	March-April	Jaba (Nowshera)	503
36	<i>Vicia sativa</i> L.	Common vetch	Jowal, Phalli	Pink	March-April	Siot (Sunderbani)	454
37	<i>Bauhinia purpurea</i> L.	Butterfly tree	Kachnar	Pink	March-April	Narian (Nowshera)	734
38	<i>Bauhinia variegata</i> L.	Mountain ebony	Kaliari	White with a pink tinge	March-May	Chachera (Rajouri)	995
39	<i>Caesalpinia Decapetala</i> (Roth) Alston	Cat s claw	-	Yellow streaked with red	April-June	Saranoo (Rajouri)	851
40	<i>Cassia absus</i> L.	Tropical Sensitive Pea	-	Yellow with a reddish tinge	August-October	Dalogra (Rajouri)	875
41	<i>Cassia fistula</i> L.	Golden Shower tree	Karangal, Amaltas	Yellow	June-September	Sial (Nowshera)	512
42	<i>Cassia mimosoides</i> L.	Feather-leave Cassia	-	Yellow	August-October	Simbal Gahi (Rajouri)	996
43	<i>Cassia occidentalis</i> L.	Foetid Cassia	-	Yellow	August-October	Banja bain (Sunderbani)	537
44	<i>Cassia tora</i> L.	Sickle Senna	Panwar, Ehrma	Yellow	June-August	Seri (Nowshera)	548
45	<i>Acacia catechu</i> (L.f.) Willd.	Cutch tree	Khair, Khadar	Creamy white	June-September	Muradpur	895
46	<i>Acacia nilotica</i>	Gum	Kikar,	Yellow	March-May	Charyal	605

	(L.) Willd. ex Delile	Arabic tree	Babul			(Nowshera)	
47	<i>Acacia modesta</i> Wall.	Blacksally	Phalai, Kallmai	Creamy white	March-july	Qila Nowshera	822
48	<i>Albizia lebbbeck</i> (L.)	Lebbeck tree	Sariin	Creamy white	April-August	Qila Nowshera	822
49	<i>Leucaena leucocephala</i> (Lam.) de Wit.	Horse tamarind	Pallai	Creamy white	April-August	Kalal (Nowshera)	770
50	<i>Mimosa pudica</i> L.	Sensitive Plant	Chui-mui	Pink	June-August	Peelo Galla (Rajouri)	879
51	<i>Mimosa rubicaulis</i> Lam.	Himalayan Mimosa	Raal (Raali)	White and Pink	July-September	Lamberi (Nowshera)	652

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