

Diversity of Fabaceae Species in Ballari and Vijayanagar District

Research Article

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Abstract

Fabaceae is one of the largest orders of flowering plants. This order is distributed worldwide and exhibits the greatest diversity of morphological types in tropical and subtropical regions of the world. Fabaceae comprises the major families such as Caesalpiniaceae, Mimosaceae and Papilionaceae. To explore the diversity of this family in Ballari District, regular field visits were made. This is one of the large agriculturally important family. It includes trees, shrubs, and herbs. This family containing ornamental, dye yielding, gum yielding and medicinal plants. Present study enumerated the Family Fabaceae with total 58 genera, 122 species largest family Fabaceae covered most of the diversity. Of which 41.33% species are herb, 12.95% species are shrub and subshrub & climbing s herb 0.81% and 31.96% are trees each. The study was documented with flowering and fruiting seasons and distribution in the Ballari and Vijayanagar localities.

Keywords: Acacia; Senna; Indigofera; Fabaceae

Introduction

Plant diversity is the sum of diversity of life on the earth. It contains all types of population and ecosystems. The studies of biodiversity have greater significance as ecologist and taxonomist try seriously to document the global biodiversity. It is essential to prepare districts floras where there is severe threat to natural vegetation due to identification of species that are in different stages of vulnerability as well as the various factors that influence the existing vegetation in any region [1]. The Fabaceae or Leguminosae, commonly known as the legume, pea, or bean family, are a large and economically important family of flowering plants. The group is the third- largest land plant family, behind only the Orchidaceae and Asteraceae, with 730 genera and over 19,400 species [2]. Papilionaceae family are herbs, shrubs or trees. Mostly it is found between and near the tropics. These are found large quantity in the old than in the new world. It is important for yield nutritious food, fiber, shelter and valuable medicines and also important for virulent poison (Sharma M. and Kumar A. 2013) [3]. Fabaceae family plants are reported for their good medicinal values

in various plant parts such as leaf, stem, bark and roots and native of these plants, in India, (Ramrakhiyani C. *et al.*, (2016). A number of these plants have great importance in medicinal purposes and also used to produce a large range of natural products including flavors, dyes, poison [4]. Leguminous plants play a vital role in this spheres being the chief suppliers of the vegetable protein to the predominantly vegetarian population of India. Legumes are grown agriculturally, primarily for their grain seed called pulses, which fulfills food desires as a nutrients to humans. Plants of this family are found throughout the world, growing in many different environments and climates. A number are important agricultural and food plants.

Study Area

Ballari and Vijayanagara are the districts of the Karnataka state in India and located in Kalyana Karnataka region. The district Ballari is located at north east part of the Karnataka, with five talukasi.e Ballari, Kampli, Sanduru, Sirguppa, and Kurugodu. The district covers with 8447 Sq. Kms. with forests and non forest areas. The district is mainly covered by scrub-thorny and dry deciduous forests.

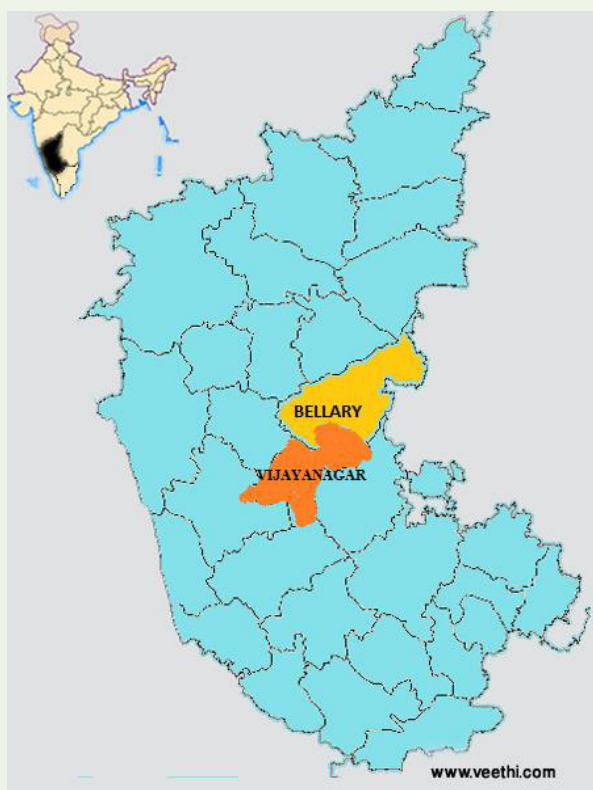


Figure 1: Ballari and Vijayanagar district in Karnataka.

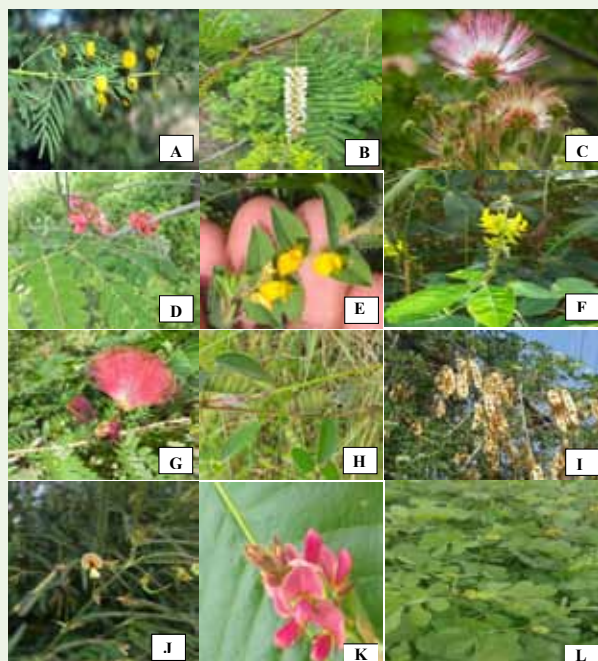


Plate 1: (A) *Acacia nilotica* (B) *Acacia chundra* (C) *Albizia saman* (D) *Cassia javanica* (E) *Crotalaria hebecarpa* (F) *Crotalaria pallida* (G) *Callindra haematocephala* (H) *Cajanus scaraboides* (I) *Albizia lebbeck* (J) *Aeschynomene indica* (K) *Alysicarpus ovalifolius* (L) *Cassia tora*.



Plate 2: (M) *Macroptelium lathyroides* (N) *Mimosa pudica* (O) *Caasia Hirsuta* (P) *Canavalea rosea*. (Q) *Caesalpinia bondoc* (R) *Centrosema pubiscense* (S) *Delonix elata* (T) *Delonix regia* (U) *Desmodium tuartosum* (v) *Indigofera wightii* (w) *Mucuna pruriens* (X) *Senna alexandrica*.

Table 1: List of Fabaceae of Ballari and Vijayanagar district.

Sl. No	Botanical name	Synonyms	Habit	Colour of the flower	Phenology
	<i>Abrus precatorius</i> L.	<i>Abrus abrus</i> (L.) Wright	Climber	Pink	September to January
	<i>Acacia auriculiformis</i> Benth	<i>Acacia auriculaeformis</i> Benth.	Tree	Yellow	August to December
	<i>Acacia catechu</i> (Roxb.) Willd	<i>Acacia sundra</i> (Roxb.) Bedd.	Tree	Pale yellow	September to March
	<i>Acacia chundra</i> (L.f.) Willd. .	<i>Acacia catechu</i> var. <i>sundra</i> (Roxb.) Prain	Tree	White	April to May
	<i>Acacia leucophloea</i> (Roxb.) Willd	<i>Mimosa leucophloea</i> (Rob.) Willd.	Tree	Yellowish White	August to March
	<i>Acacia farnesiana</i> (L.) Willd.	<i>Acacia catechu</i> var. <i>sundra</i> (Roxb.) Prain	Shrub	Yellow	March to December
	<i>Acacia horrida</i> (L.) Willd.	<i>Vachellia horrida</i> (L.) Kyal. & Boatwr.	Shrub	White	July to December
	<i>Acacia nilotica</i> (L.) Delile	<i>Vachellia nilotica</i> (L.) P.J.H. Hurter& Mabb.	Tree	Yellow	July to December
	<i>Albizia amara</i> (Roxb.) B. Boivin	<i>Acacia amara</i> (Roxb.) Willd.	Tree	Whitish yellow	March to November
	<i>Albizia saman</i> (Jacq.) Merr.	<i>Samanea saman</i> (Jaq.) Merr.	Tree	Pink	March to September
	<i>Albizia leback</i> (L.)	<i>Acacia macrophylla</i> Bauge.	Tree	White	April to October
	<i>Alysicarpus glumaceus</i> (Vahl) DC	<i>Alysicarpus glumaceus</i> subsp. <i>glumaceus</i> (Vahl) DC.	Herb	Pink – Orange	August to January
	<i>Alysicarpus ovalifolius</i> (Schum.) Leonard	<i>Alysicarpus ovalifolius</i> (Schum.) Leonard	Herb	Yellow	August to December
	<i>Alysicarpus tetragonolobus</i> Edgew	<i>Alysicarpus quadrangularis</i> Edgew. ex Baker	Herb	Red pink	September to December
	<i>Alysicarpus rugosus</i> (Willd.) DC.	<i>Mesembryanthemum hamatum</i> Willd. ex DC.	Herb	Olive	September to December
	<i>Arachis hypogea</i> L.	<i>Babiana hypogea</i> var. <i>longituba</i> G. J. Lewis	Herb	Yellow	August to September
	<i>Aeschynomene indica</i> L.	<i>Aeschynomene aquatic</i> var. <i>punctate</i> Pers.	Herb	Yellowish Pink	August to December
	<i>Bauhinia acuminata</i> L.	<i>Bauhinia longifolia</i> var. <i>acuminata</i> Micheli	Tree	White	June to September
	<i>Bauhinia racemosa</i> Lam	<i>Piliostigma racemosum</i> (Lam.) Benth.	Tree	White	May to July
	<i>Bauhinia purpurea</i> L.	<i>Bauhinia castrata</i> Blanco	Tree	Rosy purple	September to January
	<i>Butea monosperma</i> (Lam.) Taub.	<i>Camptosema erythrinoides</i> Benth.	Tree	Orange red	January to April
	<i>Caesalpinia coraria</i> (Jacq.) Willd.	<i>Tephrosia helenitis</i> subsp. <i>helenitis</i> (L.) B.Nord.	Tree	Cream yellow	September to November
	<i>Caesalpinia bonduca</i> (L.) Roxb.	<i>Caesalpinia bonducella</i> (L.) Roxb.	Liana	Yellow	March to November
	<i>Caesalpinia pulcherrima</i> (L.) Sw	<i>Garciniarandia</i> var. <i>mitis</i> (L.) Sw.	Shrub	Yellow or Red	Throughout the year
	<i>Cajanus cajana</i> (L.) Millsp.	<i>Cajanus cajan</i> (L.) Millsp.	Shrub	Yellow	December to January
	<i>Cajanus scaraboides</i> (L.) Thouars	<i>Brachycereus thouarsii</i> (F.A.C.Weber) Britton & Rose'	Climber	Yellow	July to December
	<i>Callindra haematocephala</i> Hassk	<i>Anneslia haematocephala</i> (Hassk.) Britton & P.Wilson	Shrub	Red	August to January
	<i>Canavalia rosea</i> (Sw.) DC	<i>Canavalia rosea</i> (Sw.) DC.	Climber	Purplish pink	September to December
	<i>Cassia fistula</i> L.	<i>Bactrylobium fistula</i> (L.) Willd.	Shrub	Yellow	March to July
	<i>Cassia javanica</i> L.	<i>Cassia javanica</i> var. <i>microcalyx</i> H.S.Irwin&Barneby	Tree	Rose pink	May to July
	<i>Cassia pumila</i> (Lam) K. Larsen	<i>Etilingera pavieana</i> (Pierre ex Gagnep.) R.M.Sm.	Subshrub	Bright yellow	August to September
	<i>Cassia hirsuta</i> (L.) H.S. Irwin & Barneby	<i>Cassia venenifera</i> G.Mey.	Herb	Yellow	September to January
	<i>Centrosema pubescens</i> Benth.	<i>Brabdurya pubiscens</i> (Benth) Kuntze	Climbing herb	Lilac	September to January
	<i>Chamaecrista mimosoides</i> (L.) Greene.	<i>Chamaecrista mimosoides</i> (L.) Greene	Herb	Yellow	December to April
	<i>Clitoria ternatea</i> L.	<i>Clitoria albiflora</i> Mattei	Climber	White to Purple	July to January
	<i>Crotalaria hebecarpa</i> (DC) Rudd	<i>Crotalaria uniflora</i> J.Koenig ex Roxb.	Herb	Yellow	July to December
	<i>Crotalaria sandoorensis</i> Bedd.	NIL	subshrub	Yellow	August to December
	<i>Crotalaria pallida</i> Aiton	<i>Crotalaria brownei</i> Bertero ex DC.	Shrub	Yellow	September to January
	<i>Crotalaria prostrata</i> Willd.	<i>Crotalaria ciliata</i> Buch.-Ham. ex D.Don	Herb	Yellow	October to December
	<i>Crotalaria filipes</i> Benth.	-----	Herb	Herb	August to January.
	<i>Crotalaria pusilla</i> Heyne ex Roth	-----	Herb	Herb	August to January.
	<i>Cyamopsis tetragonoloba</i> (L.) Taub.	<i>Cordaea fabiformis</i> Spreng.	Subshrub	White or Pink	September
	<i>Dalbergia paniculata</i> Roxb.	<i>Chionanthus effusiflorus</i> F.Muell.	Tree	White with Pink	May to June
	<i>Dalbergia sissoo</i> DC	<i>Dalbergiasissoo</i> Roxb. ex DC.	Tree	Whitish to pink	April to June
	<i>Delonix elata</i> (L.) Gamble	<i>Caesalpinia elata</i> (L.) Sw.	Tree	Yellowish	August to march
	<i>Delonix regia</i> (Hook) Raf	<i>Caesalpinia regia</i> (Bojer ex Hook.) D.Dietr.	Tree	Orang Red	March to August
	<i>Desmanthus virtuosus</i> (L.) Willd	<i>Acacia angustisiliqua</i> Desf.	Undershrub	White	September to December
	<i>Desmodium tortuosum</i> (Sw.) DC	<i>Desmodium physocarpus</i> Vogel	Herb	Pink to Bluish	September to January
	<i>Desmodium triflorum</i> (L.) DC.	<i>Gronatrilora</i> (L.) H.Ohashi&K.Ohashi	Herb	Bluish	Throughout the year

Dichrostachys cineria (L.) Wight & Arn.	<i>Acacia cinerea</i> (L.) Spreng.	Tree	Yellow upper white lower flowers	January – April
Dalbergia melanozylon Guillemain <i>etal.</i>	<i>Amerimnon melanooxyton</i> (Guill. & Perr.) Kuntze.s	Tree	White	August
Desmodium gangeticum (L.) DC	<i>Hedysarum collinum</i> Roxb.	Undershrub	Purple	April to September
Erythrina variegata L.	<i>Erythrinapiscidioides</i> Sweet	Tree	Red	July to November
Gliricidia sepium (Jacq) Walp	<i>Erythrinapiscidioides</i> Sweet	Tree	Pale pink	February to April
Canavalea rosea (Swartz) DC.	<i>Canavalea maritime</i> Thours	Climber	Purplish Pink	September to December
Hardwickia binnata Roxb.	<i>Caesalpinia bonducella</i> (L.) Roxb.	Tree	Pale yellowish green	April to June
Indigofera linnaei Ali	<i>Alvarezia parviflora</i> Pav. ex Nees	Herb	Red	December to February
Indigofera aspathoides DC	<i>Indigofera angulata</i> Lindl.	Undershrub	Red	August to March
Indigofera caerulea Roxb.	<i>Indigofera virgata</i> Roxb.	Shrub	Purplish pink	Throughout the year
Indigofera cordifolia Roth	<i>Indigofera biflora</i> Roth	Tree	Bright red	August to December
Indigofera glandulosa J.C Wendl.	<i>Indigofera frumentacea</i> Roxb. ex Wight & Arn.	Undershrub	Indigo	September
Indigofera spicata Forssk.	<i>Indigofera hendecaphylla</i> var. <i>acutifolia</i> Chiov.	Herb		July
Indigofera weightii Wight & Arn	<i>Indigofera weightii</i> Wight & Arn	Shrub	Silvery white	August to July
Indigofera tinctoria L.	Indigofera sumatrana Gaertn.	Undershrub	Red	Throughout year
Indigofera trita L. f.	Indigofera cinerea Ortega	Herb	Pink	August to December
Leucaena leucocephala (Lam) deWit.	<i>Tephrosia aurantiaca</i> f. <i>albescens</i> Dewit	Tree	Whitish	July to October
Macroptelium lathyroides (L.) Urb.	<i>Macroptiliumlathyroides</i> var. <i>angustifolium</i> Stehlé	Herb	Red purple	December to February
Meliolotus alba Medik	<i>Medicago alba</i> E.H.L.Krause	Herb	white	December to April
Millettia racemosa (Roxb.)Benth.	<i>Endosamara racemosa</i> var. <i>pallida</i> (Dalzell & A.Gibson) J.Compton&Schriire	Liana	Pink to whitish	March to June
Mimosa pudica L.	<i>Mimosa pudica</i> var. <i>glabrata</i> DC.	Herb	Purple	October to January
Mucuna pruriens (L.) DC	<i>Carpogoncapitatus</i> Roxb.	Climber	Purple	September to December
Mundulea sericea (Willd.) A.Chev.	<i>Cytisussericeus</i> Willd.	Tree	Pink	April to November
Neptunea triquetra Rottler & Willd.	<i>Trianthema triquetra</i> Willd. ex Spreng.	Herb	Yellow	May to September
Paracalyx scariosus (Roxb.) ali.	<i>Cylistascariosa</i> Roxb.	Liana	Yellowish White	March
Parkia biglondosa Wight & Arn	<i>Mimosa pedunculata</i> Roxb.	Tree	White	October to January
Parkinsonia aculata L.	<i>Parkinsoniaflorida</i> subsp. <i>florida</i> (Benth. ex A.Gray) S.Watson	Tree	Yellow	January to May
Pterocarpus marsupium Roxb.	Pterocarpus bilobus G.Don.	Tree	Yellow	September to December
Peltophorum pterocarpum (DC.) K. Heyne	<i>Baryxylumferrugineum</i> (Decne.) F.N.Williams	Tree	Yellow	September to November
Phaseolus lunatus (L.)	<i>Dolichostonkinensis</i> Bui-Quang-Chieu	Climber	White	August to September
Piliostigma malabaricum (Roxb.) Benth.	<i>Bauhinia acida</i> Reinw.	Tree	White	October to November
Pisum sativum L.	<i>Pisum sativum</i> var. <i>arvense</i> (L.) Poir.	Herb	White	May to September
Pithocellobium dulce (Roxb) Benth	<i>Andropogon schoenanthus</i> var. <i>martinii</i> (Roxb.) Benth.	Tree	White	October to January
Pongamia pinnata (L.)Pierre	<i>Pongamia pinnata</i> (L.) Pierre	Tree	Pinkish White	April to June
Prosopis cineria (L.)Druce	<i>Bisnaga cornigera</i> (DC.) Orcutt	Tree	Yellow	December to March
Prosopis juliflora (Sw). DC	<i>Acacia cumanensis</i> Humb. & Bonpl. ex Willd.	Tree	Yellow	August to May
Psorelea corylifolia L.	<i>Cullen corylifolium</i> (L.) Medik.	Herb	Bluish	March to April
Pterolobium hexapetalum (Roth) Santaup & Wagh.	<i>Caesalpinia lacerans</i> Roxb.	Tree	White	March to April
Rothia indica (L.) Druce	<i>Dillwynia trifoliata</i> Roth	Herb	Yellow	August to December
Rhychosia capitata (Roth.)DC	<i>Ampelocissus tomentosa</i> (Roth) Planch.	Climber	Yellow	September to December
Rhychosia rotii Aitch.	<i>Heliotropium luteum</i> Aitch.	Climber	Dark red	July to September
Rhynchosia minima (L.) DC	Dolicholusminimus (L.) Medik.	Climber	Yellow	September to December
Rhynchosia suaveolens (L.f.)DC	<i>Cajanus suaveolens</i> (L.f.)Graham	Climber	Yellow	August to October
Saraca asoca (Roxb.)Willd.	<i>Jonesia asoca</i> Roxb.	Tree	Orange to Red	January to May
Senna alata (L.) Ram	<i>Peniocereuslazaro-cardenasii</i> (J.L.Contr., J.Jiménez Ram., Sánchez-Mej. & C.Toledo) D.R.Hunt	Undershrub	Yellow	September to December
Senna alexandrica Mill.	<i>Cassia acutifolia</i> var. <i>eriocarpa</i> Maire	Herb	Yellow	November to February
Senna auriculata (L.)Roxb.	<i>Cassia auriculata</i> L.	Shrub	Yellow	Throughout the year
Senna fistula L.	<i>Bactrylobium fistula</i> (L.)Willd.	Tree	Yellow	May to July
Senna holesericea (Fresen.) Greuter	<i>Cassia holesericea</i> Fresen.	Herb	Yellow	November

	<i>Senna italica</i> Mill.	<i>Cassia arachoides</i> Burch.	Herb	Yellow	Throughout the year
	<i>Senna occidentalis</i> (L.) Link.	<i>Cassia caroliniana</i> Walter	Undershrub	Yellow	Throughout the year
	<i>Senna pumila</i> Lam	<i>Senna surattensis</i> subsp. <i>glauca</i> (Lam.)X.Y.Zhu	Herb	Yellow	December
	<i>Senna siamea</i> Lam	<i>Cassia arborea</i> Macfad.	Tree	Yellow	Throughout the Year
	<i>Senna siercea</i> Sw.	<i>Cassia acutifolia</i> var. <i>eriocarpa</i> Maire	Herb	Yellow	August to January
	<i>Senna sophora</i> (L.) Roxb.	<i>Cassia aegyptiaca</i> Willd.	Undershrub	Yellow	Throughout the Year
	<i>Senna surattensis</i> (Burm.f.) H.S.Irwin&Barneby	<i>Cassia fastigiata</i> Vahl	Shrub	Yellow	October to December
	<i>Senna tora</i> (L.) Roxb.	<i>Cassia borneensis</i> Miq.	Herb	Yellow	October to February
	<i>Sesbania bisponassensu</i> auct.	<i>Aeschynomeneaculeata</i> Royle	Shrub	Yellow	August
	<i>Sesbania grandiflora</i> (L.) Pers.	<i>Aeschynomene coccinea</i> L.f.	Tree	White	Throughout the year
	<i>Stylosanthes fruticosa</i> (Retz.) Alston	<i>Arachis fruticosa</i> Retz.	Herb	Yellow	August to December
	<i>Tamarindus indica</i> L.	<i>Cavaraeaelegans</i> Speg.	Tree	Yellow with pink red stripes	May to July
	<i>Tavernaria cuneifolia</i> (Roth) Ali	<i>Hedysaru mcuneifolium</i> Roth	Herb	Purple	Throughout the year
	<i>Tephrosia purpurea</i> (L.) Pers	<i>Cracca purpurea</i> L.	Herb	Pink	October to December
	<i>Tephrosia tinctoria</i> Pers.	<i>Cracca tinctoria</i> L.	Undershrub	Orange	October
	<i>Tephrosia villosa</i> (L.) Pers	<i>Cracca villosa</i> L.	Herb	Purple	October to December
	<i>Vauchelia horrida</i> (L.) Willd.	<i>Acacia horrida</i> (L.) Willd.	Shrub	Yellowish	May to August
	<i>Vigna mungo</i> (L.) Hepper.	<i>Azuki mungo</i> (L.) Masam.	Herb	Braight Yellow	August
	<i>Vigna radiata</i> (L.) R.Wilczek	<i>Azuki radiata</i> (L.) Ohwi	Herb	Yellow	August
	<i>Vigna trilobata</i> (L.) Verdc.	<i>Dolichos trilobatus</i> L.	Climber	Yellow	October
	<i>Vigna unguolata</i> (L.) Walp.	<i>Calopogonium pendunculatum</i> Standl.	Herb	Blue to purple	August
	<i>Vigna acotinifolia</i> (Jacq.) Verdc.	<i>Phaseolus aconitifolius</i> Jacq.	Climbing shrub	Yellow	September to December
	<i>Zornia diphylla</i> (L.) Pers (L.) Pers	<i>Hedysarumconjugatum</i> Willd.	Herb	Yellow	August
	<i>Zornia gibbosa</i> Span	<i>Zornia angustifolia</i> Sm.	Herb	Yellow	September to December

The district Vijayanagara is located in the state Karnataka, this district was carved out Ballari district officially on 2 October 2021 to become a district, with six talukas i.e. Hosapete, Harapanahalli, Kudligi, Hoovina Hadagali, Hagaribommanahalli and Kotturu. The district is covered by 4252 square kilometers with forest and non forest areas. The district is mainly covered by scrub-thorny and dry deciduous forest.

Materials and Methods

The intensive qualitative field surveys were conducted throughout Ballari and Vijayanagara districts from 2020 to 2022. All the plants growing naturally in various habitats including Wild and cultivated plants were also documented. The collected plant species were identified by using national floras [5, 6], state floras [7, 8], local and district floras [9-11], books [12], recent literatures and check lists. The collected specimens were photographed, pressed, dried and prepared herbarium followed by standard method of Rao and Jain (1977). The prepared Herbarium specimens were deposited at Mahatma Gandhi Botanical Garden, GKVK, UAS, Bengaluru.

Results and Discussion

The intensive qualitative field survey of species of the family Fabaceae of Ballari and Vijayanagara Districts shows 122 species under 58 genera with different Habit. Of which *Senna* was dominant genera with 11 species; followed by *Acacia* with 7 species, *Crotalaria* 6 species; *Indigofera* with 8 species, *Vigna* 5 species, *Cassia* 4 species, *Alysicarpus* 4 species, *Dalbergia* 3 species, *Desmodium* 3 species, *Tephrosia* 3 species, *Albizia* 3 species *Rhynchosia* 3 species

Sesbania 2 species *Zornia* 2 species, *Cajanus* 2 species, *Abrus*, *Aralia*, *Butea*, *Callindra*, *Canavalia*, *Clitoria*, *Chamaecrista*, *Desmanthus*, *Dichrostachys*, *Erythrina*, *Gliricidia*, *Hardwickia*, *Macroptelium*, *Leucaena*, *Meliolotus*, *Melletia*, *Mucuna*, *Mundolea*, *Paracalyx*, *Parkia*, *Parkinsonia*, *Phaseolus*, *Piliostigma*, *Pisum*, *Pongamia*, *Psorelia*, *Pterolobium*, *Saraca*, *Stylosanthus*, *Tamarindus*, *Taverniera*, *Vauchelia*, and other having 1 species. The catalogue of plant species along with the Botanical name, synonyms, habit, colour of the flower, phenology, in the table – 1. Based on life form classification the collected species show more dominant with Herbs (41 species 33.60%), followed by Shrubs (13 Species, 10.65%), Subshrubs (03 Species, 2.45%), Climber (12 Species, 9.83%) Climbing herb (1 species, 0.81%) Lianas (03 species, 2.45%) Under Shrubs (03 Species, 2.45%) Trees (39 Species, 31.96%).

Conclusion

In the present investigation, total 122 species and 58 genera of Fabaceae were recorded from Ballari & Vijayanagara districts. Of which 41.33% species are herb, 12.95% species are shrub and subshrub & climbing s herb 0.81% and 31.96% are trees each. Flowers of most of the species are yellow coloured which draws the attention of all. Most of the collected species have been used as medicines in traditional medicine practices in India especially Ayurveda, Unani and Siddha. *Caesalpinia pulcherrima*, *Cajanus cajana*, *Cassia javanica*, *Crotalaria pallida*, *Desmodium triflorum*, *Gliricidium sepium*, *Indigofera cordifolia*, *Mimosa pudica*, *Mucuna pruriens*, *Macroptelium lathyroides*, *Tamarindus indica*, *Vigna radiata*, *Vigna aconitifolia*, *Tephrosia purpurea* etc. have mentioned in many

research papers regarding ethnobotanical studies from various parts of India. Most of the plants are aromatic plants in flowers. Few species are grown as ornamental plants, *Parkinsonia aculata*, *Caesalpinia pulcherrima*, *Acacia auriculiformis*, *Mimosa pudica*, *Delonix regia*, *Delonix elata*, *Senna* spp. *Callindra haematocephala* etc. *Indigofera cordifolia*, *Macroptelium lathyroides*, *Rothia indica*, *Alysicarpus glumaceus*, *Alysicarpus tetragonolobus*, *Rhynchosia minima* and *Rhynchosia suaveolens* etc are reported as weeds of cultivated lands, gardens, and disturbed lands. The present investigation is an effort to document the Fabaceae of Ballari and Vijayanagara Districts where most it is observed that majority of the species are found as natural vegetation and may prove to be potential candidates for exploration of antibacterial, antihelminthic, anti-inflammatory, anticancer, would healing properties. Many plant species mentioned above which have bright coloured inflorescence can be cultivated as ornamentals.

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References

1. PU Dulare, RB Kamble, NR Ugemuge, A Chaturvedi (2021) Diversity and Distribution of Order Fabales in Nagpur City, Maharashtra, *Advances in Zoology and Botany* 9: 20-27.
2. A Rahman, MIA Parvin (2015) Taxonomic Studies on the Family Fabaceae (Weeds) at Rajshahi University Campus, *Plant* 3: 20-25.
3. M Sharma, A Kumar (2013) Leguminosae (Fabaceae) in tribal medicines. *Journal of Pharmacognosy and Phytochemistry* Pp: 276-283.
4. S Patel, DB Shah (2014) Phylogeny in Few Species of Leguminosae Family Based on matK Sequence, *Computational Molecular Biology* 4: 1-5.
5. Hooker JD (1882) *The Flora of British India*.
6. Gamble JS (1915) *Flora of the Presidency of Madras Vol 2: Adlard Sons Ltd, London*.
7. Kartikeyan S, Sanjappa M, Moorthy S, Bhattacharjee B, Dash SS, Meena SH, and Mastakar VK, (2020) *Asteraceae In Flowering. Plants, India. An Annotated Check list 1 : 713* (Eds. AA. Mao & SS. Dash) B.S.I. Kolkata.
8. Singh NP (1988) *Flora of Eastern Karnataka*, Mittal Publications, New Delhi Vols: 1-2.
9. Sharma BD, Singh NP, Raghavan RS, Deshpande UR (1984) *Flora of Karnataka analysis, Botanical survey of India. Howrah, Series 2 Pp: 394*.
10. Seetharam YN, Kotresha K, Uplankar SB (2000) *Flora of Gulbarga District, Prasaranga, Gulbarga Univers.*
11. Ramaswamy SV and Razi BA (1973) *Flora of Bangalore District, Prasaranga, University of Mysore, Mysore Pp: 739*.
12. Kavitha S, Rajanna MD (2015) *A Handbook on weeds of Karnataka. Centre for plant taxonomic studies*.
13. Kavitha S (2019). *A Handbook on weeds of Karnataka – a detailed study of weeds. Shodhmanthan* 10.
14. Kavitha S (2019) Floristic diversity of Vijayanagara Sri Krishnadevaraya University campus Ballari. *Indian journal of Plant Science*. 8: 1-13.
15. Kavitha S, Eriswamy K, Sharanabasav A (2021) Floristic diversity of Moka. *Indian Journal of Plant science* 10: 36-41.
16. Mandel JR, Dikow RB, Siniscalchi CM, Thapa R, Watson LE, Funk VA (2019) "A fully resolved backbone phylogeny reveals numerous dispersals and explosive diversifications throughout the history of Asteraceae". *Proceedings of the National Academy of Sciences of the United States of America. National Academy of Sciences*. 116: 14083-14088.
17. Ramanjaneyulu K, A Bhargavi, PRv Buddaraj, Pavani Siri K, P Meharvineela (2011) Evaluation of phytochemical and antibacterial activity of *Butea monosperma* leaf extracts, *International Journal of Research in Ayurveda Pharmacy* 2: 1563-1565.