**MANUSCRIPT SUBMISSION LETTER**

Date 3. 1. 2017

Dear Editor,

I, L. B. Chaudhary, on behalf of my co-authors, Arun Kumar Kushwaha and Lalit Mohan Tewari submit the following manuscript titled “**Phytodiversity of Sonbhadra District, Uttar Pradesh: A Checklist**” for publication consideration in the ***Journal of Threatened Taxa***. I understand the objectives of the journal and have formatted the manuscript to fit the style and needs of *Journal of Threatened Taxa*. I also understand the procedure followed in the review process.

I affirm that the manuscript has been prepared for and sent only to the ***Journal of Threatened Taxa*** for publication consideration and not submitted to any other journal or any other type of publication (including web hosting) either by me or any of my co-authors.

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I attach the checklist for your reference.

Thanking you,

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**CHECKLIST**

**Title:** Phytodiversity of Sonbhadra District, Uttar Pradesh: A Checklist

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**Authors:** Arun Kumar Kushwaha, Lalit Mohan Tewari& Lal Babu Chaudhary

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**Author contribution** (role of each author in preparation of manuscript or part in project; keep it concise)

**Mr. Arun Kumar Kushwaha: Survey, collection, identification and writing manuscript.**

**Prof. Lalit Mohan Tewari: Provided guidelines and discussion on the subject.**

**Dr. Lal Babu Chaudhary: Survey, collection, identification, structure of manuscript and overall management of the work.**

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CSIR- National Botanical Research Institute, Lucknow

**Phytodiversity of Sonbhadra District, Uttar Pradesh: A Checklist**

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**Abstract:** The present study provides a taxonomic account of angiosperms of Sonbhadra district in Uttar Pradesh. The district which comes under vindhyan region of Uttar Pradesh, is one of the richest areas in the state as far as plant diversity is concerned. It is spread over about 6788 km² of geographical area which constitutes about 36% forest cover on highly undulated land. The extensive survey of the area conducted during 2011­–2016, critical examination of previous collections housed at various herbaria and review of published literature have resulted in a total of 705 species belonging to 459 genera under 110 families. Out of which, 541 species (76.73%) under 354 genera (77.12%) and 89 families (80.90%) belong to dicots and 164 species (23.26%) under 105 genera (23.26%) and 21 families (19.09%) to monocots. The present enumeration of the species also includes about 76 those species which are cultivated in the area for various purposes. The family Fabaceae (110 spp.) comprises of maximum number of species followed by Poaceae (89 spp.), Asteraceae (38 spp.), Cyperaceae (33 spp.) and Malvaceae (33 spp.). Some of the largest genera in the area are: *Cyperus* (14 spp.), *Ipomoea* (9 spp.), *Solanum* (9 spp.), *Ficus* (9 spp.), *Crotalaria* (7 spp.), *Desmodium* (7 spp.), *Bauhinia* (6 spp.), *Hibiscus* (6 spp.), *Fimbristylis* (6 spp.), *Acacia* (5 spp. ) etc. The entire forest is chiefly dominated by trees like *Acacia* *catechu* (L.f.) Willd., *Boswellia serrata* Roxb. ex Colebr., *Butea* *monosperma*(Lam.) Taub., *Hardwickia binata* Roxb. and *Shorea* *robusta* Gaertn.

**Keywords**: Floristic diversity, Vindhyan region, Sonbhadra District, Uttar Pradesh.

**INTRODUCTION**

The floristic account provides lots of information of plant wealth of an area which may be beneficial for university students, botanists, researchers, NGO's, naturalists, environmental engineers, forest managers, conservation biologists, policy makers etc. Knowledge of floristic composition and structure of forest are also useful in identifying ecologically and economically important plants and analysing their diversities and also protecting threatened plants (Addo-Fordjour et al., 2009). In past, many important floristic accounts have been published for several states, districts and biogeographic regions of India and abroad. In addition to general flora of Uttar Pradesh (Duthie, 1903–1929, Kanjilal, 1966, Rau, 1969, Uniyal et al., 1999; Chaudhary et al. 2016), several work related with different districts and national parks and sanctuaries have also been produced by many workers (Kanjilal, 1933; Srivastava, 1938; Singh, 1969; Srivastava, 1976; Sharma & Pandey, 1984; Sharma & Dhakre, 1995; Verma & Ranjan, 1995; Singh, 1997; Saini, 2005; Singh & Khanuja, 2006; Kumar et al., 2015). However, the floristic account of Sonbhadra district of Uttar Pradesh is still awaited since long inspite of its rich diversity. Until or unless the documentation of plant wealth of all districts of the state is not fully achieved, the idea to produce a comprehensive flora of the whole state will be incomplete. Hence, there is a need for proper inventorisation and documentation of all plants available in Sonbhadra district with their up to date taxonomic information. Since, the area is very rich in minerals and forest resources, many industries and factories of different kinds have been developed here. Therefore, the present study will also be very important for a comparative study of the plants of the area in future and also to examine the effects of industrial pollutants on them.

Although, the district has not been thoroughly inventorised earlier, however, the reference on the plants of study area are available in Bhattacharyya (1963, 1964) and Srivastava (1955) wherein the plants of erstwhile Mirzapur district have been dealt. In these studies about 460 species have been listed including about 130 species from the study area. In addition, a few scattered work chiefly pertaining to the ethnobotanical and medicinal plants have also been carried out from the area (Singh et al., 2002; Chaudhary, 2010; Singh et al., 2010; Singh et al., 2012; Singh & Dubey, 2012; Mishra et al., 2012). Recently, Kushwaha et al. (2016 a, b) have thoroughly studied the family Cucurbitaceae of the area and have also presented a preliminary overview of angiospermic plants. Hence, the present work is the first study of its kind from the study area after its recognition as a district.

**MATERIALS AND METHODS**

In this study, 12 field tours in different seasons have so far been conducted between 2011–2015 to survey the area. The plant materials were collected either in flowering or fruiting or in both stages with detailed information such as habit, habitat, colour of flowers and fruits, shape and size of trees, nature of bark of trees, GPS information, conservation status etc. The herbarium specimens were prepared following standard procedure out lined by Lawrence (1951) and Jain & Rao (1977). The identification of species was made with the help of different floras and important taxonomic works (Hooker, 1872–1897; Duthie, 1903–1929; Brandis, 1906; Singh, 1997) and also after matching with the authentic specimens housed at various Indian herbaria like BSA, BSD, CAL, DD and LWG. All specimens collected in the present study have been deposited at LWG for future records. In the present treatment, each species has been furnished with correct recent name following websites like GRIN, IPNI, ILDIS, The Plantlist, Wikipedia, Tropicos etc., growth form (habits) and reference to voucher specimens along acronym of the herbarium where specimens are dposited. The families and genera and species within genus have been arranged alphabetically in the list. The cultivated species have been marked with asterisk mark (\*).

**STUDT AREA**

Uttar Pradesh, one of the largest states of India with an area of about 240928 km2, has been divided into 75 districts. However, its forest cover is about 16,583 km2 which is only 6.88 % of its total geographical area (Anonymous, 2011). In the present study, Sonbhadra district has been selected for the floristic study to know the plant wealth of the area (Figure 1). Sonbhadra district was carved out from the district Mirzapur on 4th March 1989. It is 2nd largest district of the state comprising about 6788 km² geographical area. It lies between 24° 41′ 23″ N, 83° 3′ 55″ E at elevations range from 315 – 485 m. The temperature of the area varies from 32°C – 42°C in the summer and 2°C – 15°C in the winter. This district is situated in the extreme south-east of the state and is bounded by Mirzapur district in the north-west, Chandauli district in the north, Kaimur and Rohtas districts of Bihar in the north-east, Garhwa district of Jharkhand state in the east, Koriya and Surguja districts of Chhattisgarh state in the south and Singrauli district of Madhya Pradesh in the west. The district occupies 36.79% (i.e. 3782.86 km²) forest cover of its geographical area in the state. The topography of the area is uneven due to presence of hillocks. The area which comes under vindhyan plateau of the state has tropical dry deciduous forest (Singh & Dubey, 2012) (Image 1).

**RESULT AND DISCUSSION**

The whole of the areae is covered with natural scrubby jungle and thick forests. Almost entire plateau represents a uniform horizontal stratification of rocks. On the top of plateau these rocks are unsuitable for the growth of broad leaved plants and therefore, represented by uniform scrubby dry vegetation. The borad leaved plants are generally seen on the slopoe of plateau. Over all, the entire forest is mixed dry deciduous, but evergreen trees are frequently seen in ravines. The data collected from field and herbarium studies reveal that the entire area contains about 705 species under 459 genera and 110 families including 76 cultivated ones which have been planted in the area for different purposes (Table-1). Out of that, 541 species (76.73%) under 354 genera (77.12%) and 89 families (80.90%) belong to dicots and 164 species (23.26%) under 105 genera (22.87%) and 21 families (19.09%) to monocots (Figure 2). The family Fabaceae have maximum number of species (52 Genera, 110 species) followed by Poaceae (63 Genera, 89 species), Asteraceae (32 Genera, 38 species), Malvaceae (15 Genera, 33 species), Cyperaceae (9 Genera, 33 species), Cucurbitaceae (11 Genera, 20 species), Acanthaceae (11 Genera, 17 species), Convolvulaceae (8 Genera, 17 species), Solanaceae (5 Genera, 16 species) and Rubiaceae (13 Genera, 15 species) (Figure-3). Some of the dominant genera in the forest are *Cyperus* (14 spp.), *Ipomoea* (9 spp.), *Solanum* (9 spp.), *Ficus* (9 spp.), *Crotalaria* (7 spp.), *Desmodium* (7 spp.), *Bauhinia* (6 spp.), *Hibiscus* (6 spp.), *Fimbristylis* (6 spp.), *Acacia* (5 spp. ) etc. (Figure 4). Among all plants, 322 species (45.67%) are herbs, 163 species (23.12%) are trees, 120 species (17.02 %) are grasses, 76 species (10.21 %) are shrubs and 28 species (3.97 %) are climbers (Figure-5). Some of the commonly occurring tree species in the forest are *Acacia* *catechu* (L.f.) Willd., *Anogeissus* *latifolia* (Roxb. ex DC.) Wall. ex Guillem. & Perr., *Bridelia retusa* (L.) A. Juss.*, Bauhinia racemosa* Lam.*, Boswellia serrata* Roxb. ex Colebr., *Butea* *monosperma* (Lam.) Taub. (Image 2A), *Cassia fistula* L. (Image 2B), *Casearia* *tomentosa* Roxb. (Image 2C), *Desmodium oojenenensis* (Roxb.) H. Ohasi (Image 2D), *Diospyros melanoxylon* Roxb.*, Diospyros montana* Roxb. (Image 2E), *Erythrina* *stricta* Roxb. (Image 2F), *Ficus benghalensis* L. (Image 3A), *Flacoutia indica* (Burm.f.) Merr.*, Haldina cordifolia* (Roxb.) Ridsdale, *Hardwickia binata* Roxb. (Image 3B)*, Holoptelea* *integrifolia* ( Roxb.)Planch. (Image 3C), *Lagerstroemia parviflora* Roxb.*, Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr. (Image 3D), *Mallotus philippensis* (Lam.) Müll.Arg. (Image 3E), *Miliusa tomentosa* (Roxb.) Sinclair*, Leucaena leucocephala* (Lam.) de Wit (Image 3F)*, Mitragyna parvifolia* (Roxb.) Korth. (Image 4A), *Murraya koenigii* (L.) Spreng. (Image 4B), *Limonia* *acidissima* Groff (Image 4C), *Nyctanthes arbortritis* L.*, Pithecellobium dulce* (Roxb.) Benth. (Image 4D), *Prosopis* *juliflora* (Sw.) DC. (Image 4E), *Shorea* *robusta* Gaertn.*,* *Soymida* *febrífuga* (Roxb.) A. Juss., *Terminalia bellirica* (Gaertn.) Roxb. (Image 4F)*, Terminalia* *elliptica* Willdetc. Amongshrubs *Abutilon indicum* (L.) Sweet, *Adhatoda zeylanica* Medik., *Barleria cristata* L., *Calotropis procera* (Aiton) Dryand., *Capparis zeylanica* L. (Image 5A), *Cissampelos pareira* L., *Clerodendrum phlomidis* L.f., *Crotalaria albida* Roth, *Desmodium heterocarpon* (L.) DC., *Gloriosa superb* L. (Image 5B), *Helicteres isora* L., *Urena lobata* L. (Image 5C), *Woodfordia fruticosa* (L.) Kurz etc*.* are frequently seen. Under herbaceous elements *Anagallis arvensis* L. (Image 5D), *Ageratum conyzoides* (L.) L. (Image 5E), *Bidens* *pilosa* L., *Byttneria* *herbacea* Roxb.*, Crotalaria* *prostrate* Willd.*, Coccinia grandis* (L.) Voigt (Image 5F), *Desmodium* *gangeticum* (L.) DC. *Elephantopus* *scaber* L.*, Evolvulus* *alsinoides* (L.) L.*, Hyptis* *suaveolens* (L.) Poit, *Sida* *cordata* (Burm.f.) Borss.Waalk., *Solanum incanum* L. (Image 6A), *Solanum* *surattense* Burm. f., *Tephrosia* *strigosa* (Dalzell) Santapau & Maheshw.*, Triumfetta pentandra* A. Rich.*, Uraria* *picta* (Jacq.) DC.*,* etc. are predominantely occurring species. The conspicuous climbers are *Ampelocissus* *latifolia* (Roxb.) Planch., *Cryptolepis* *dubia* (Burm.f.) M.R.Almeida, *Ipomoea quamoclit* L. and *Mucuna pruiens* (L.) DC. *Arundo donax* L. (Image 6B), *Cyperus* *compactus* Retz., *Cyperus* *glomeratus* L., *Cyperus* *compressus* L., Desmostachya bipinnata (L.) Stapf (Image 6C), *Eleusine indica* (L.) Gaertn. (Image 6D), *Eragrostis* *amabilis* (L.) Wight & Arn, *Eragrostis* *japonica* (Thunb.) Trin., *Fimbristylis bisumbellata* (Forssk.) Bubani, *Fimbristylis* *dichotoma* (L.) Vahl, *Fimbristylis* *tetragona* R.Br., *Kyllinga* *brevifolia* Rottb. (Image 6E), *Leptochloa* *chinensis* (L.) Nees, *Polypogon monspeliensis* (L.) Desf. (Image 6F) etc. are some of the common grasses in the area.

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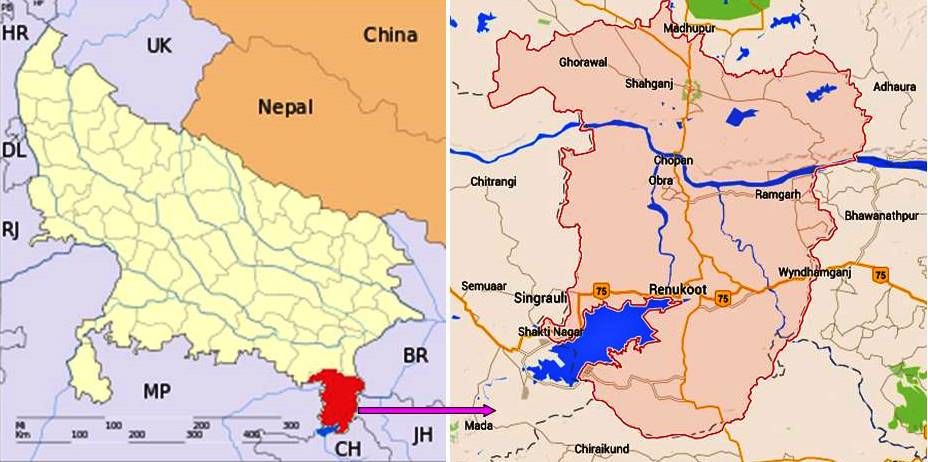
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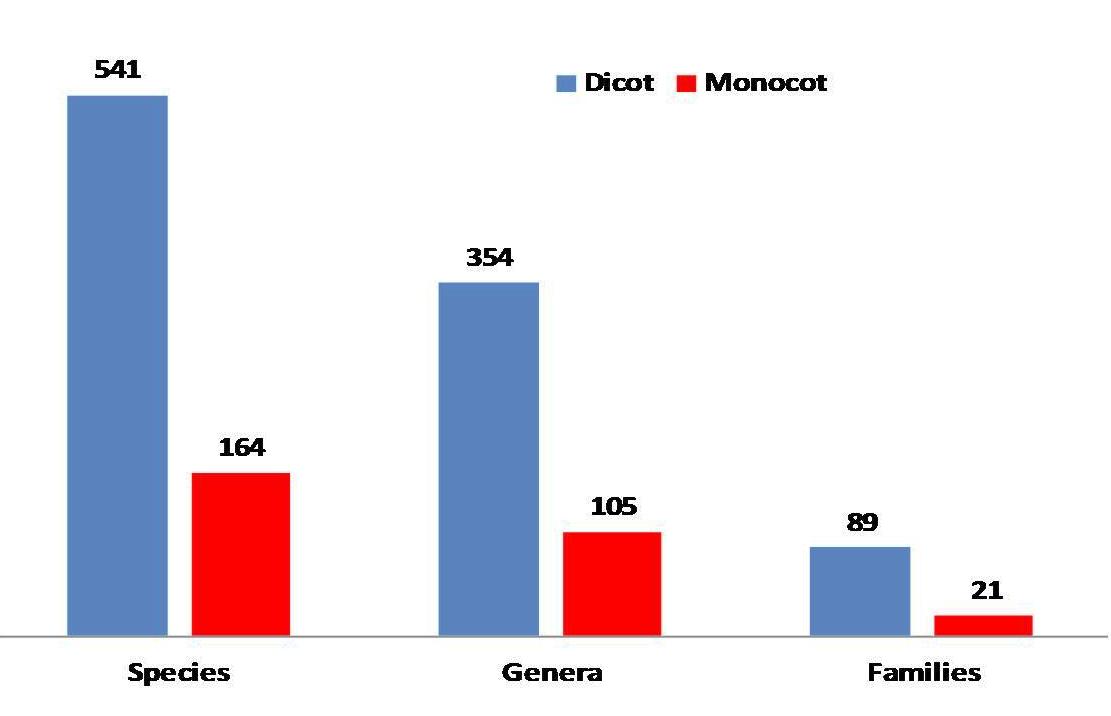
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**Table 1:** List of species

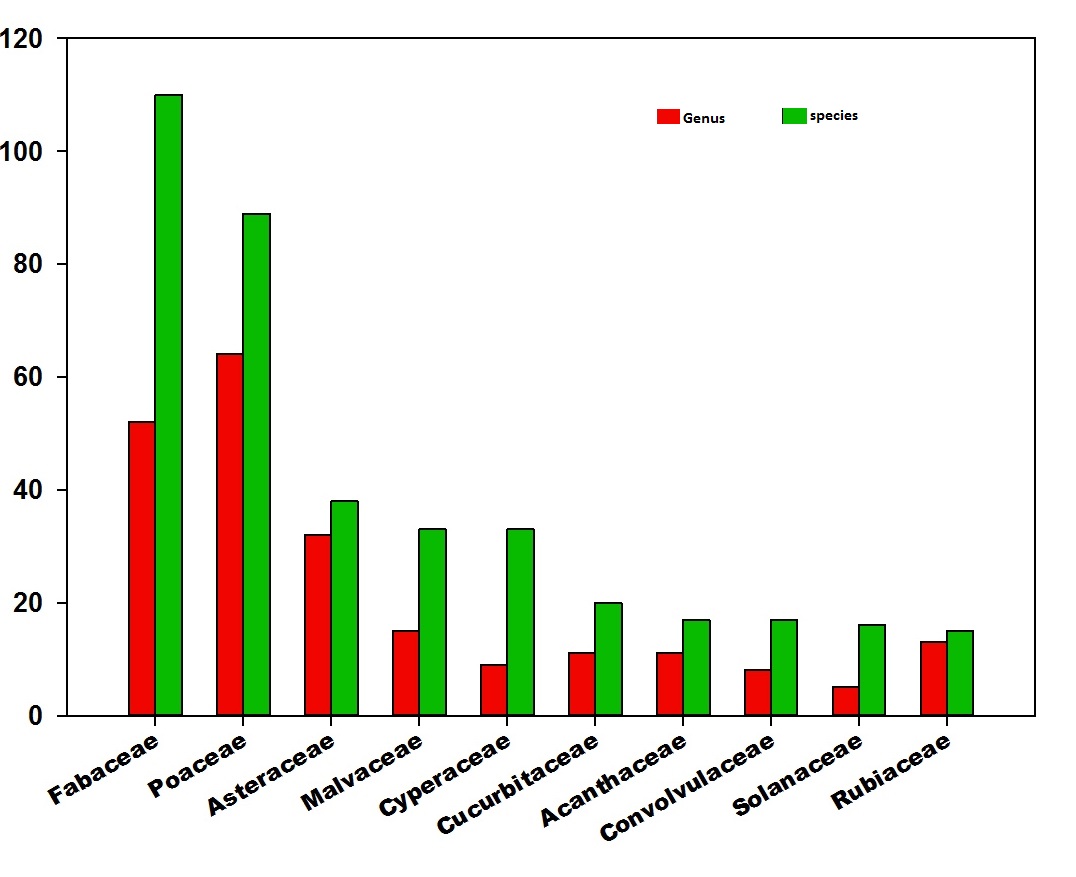
|  |  |  |  |
| --- | --- | --- | --- |
| **Family** | **Taxa** | **Growth form** | **Collection No.** |
|  | **DICOT** |  |  |
| Acanthaceae | *Adhatoda zeylanica* Medik. | Shrub | Kushwaha 304140 (LWG) |
| *Andrographis* *echioides* (L.) Nees | Herb | Panigrahi 12006 (BSA) |
| *Andrographis paniculata* (Burm. f.) Wall. ex Nees in Wall | Herb | Kushwaha 304101 (LWG) |
| *Barleria* *cristata* L. | Shrub | Kushwaha 254593 (LWG) |
| *Barleria* *prionitis* L. | Shrub | Kushwaha 254285 (LWG) |
| *Dipteracanthus* *prostratus* (Poir.) Nees | Herb | Panigrahi 12221 (BSA) |
| *Elytraria* *acaulis* (L.f.) Lindau | Herb | Kushwaha 304137 (LWG) |
| *Hemigraphis* *hirta* (Vahl) T.Anderson | Herb | Kushwaha 304195 (LWG) |
| *Hygrophila* *auriculata* (Schumach.) Heine | Herb | Panigrahi 9676 ( BSA) |
| *Hygrophila* *erecta* (Burm.f.) Hochr. | Herb | Panigrahi 2059 (BSA) |
| *Hygrophila* *polysperma* (Roxb.) T.Anderson | Herb | Panigrahi 13417 (BSA) |
| *Justicia* *diffusa* Willd. | Herb | Panigrahi 20504 (BSA) |
| *Justicia* *prostrata* Schltdl. ex Nees | Herb | Panigrahi 8451 (BSA) |
| *Justicia* *quinqueangularis* K.D.Koenig ex Roxb. | Herb | Panigrahi 2247 (BSA) |
| *Peristrophe* bicalyculata (Retz.) Nees | Herb | Kushwaha 259263(LWG) |
| *Ruellia* suffruticosa Roxb. | Shrub | Mishra 9935 (BSA) |
| *Rungia* pectinata (L.) Nees | Herb | Kushwaha 259237(LWG) |
| Aizoaceae | *Glinus* *oppositifolius* (L.) Aug. DC. | Herb | Singh at al. EBH 249 (LWG) |
| *Trianthema* *portulacastrum* L | Herb | Kushwaha 304102 (LWG) |
| Ampelidaceae | *Ampelocissus* *latifolia* (Roxb.) Planch. | Climber | Mishra 9736 (BSA) |
| Amranthaceae | *Achyranthes* *aspera* L. | Herb | Kushwaha 264710 (LWG) |
| *Aerva* *lanata* (L.) Juss. | Herb | Kushwaha 254359 (LWG) |
| *Allmania* *nodiflora* (L.) R.Br. ex Wight | Herb | Panigrahi 12590 (BSA) |
| *Alternanthera* *ficoidea* (L.) Sm. | Herb | Kushwaha 254289 (LWG) |
| *Alternanthera* *paronychioides* A.St.-Hil. | Herb | Kushwaha 254690 (LWG) |
| *Alternanthera* *sessilis* (L.) R.Br. ex DC. | Herb | Kushwaha 259235 (LWG) |
| *Amaranthus* *spinosus* L. | Herb | Kushwaha 254691 (LWG) |
| *Amaranthus* *tricolor* L. | Herb | Panigrahi 12631 (BSA) |
| *Amaranthus* *viridis* L. | Herb | Kushwaha 254700 (LWG) |
| *\*Celosia* *argentea* L. | Herb | Kushwaha 245695 (LWG) |
| *Digera* *muricata* (L.) Mart. | Herb | Kushwaha 245692 (LWG) |
| *Nothosaerva* *brachiata* (L.) Wight | Herb | Kushwaha 304104 (LWG) |
| Anacardiaceae | *Buchanania* *cochinchinensis* (Lour.) M.R.Almeida | Tree | Kushwaha 259255 (LWG) |
| *Lannea coromandelica* (Houtt.) Merr. | Tree | Kushwaha 259825 (LWG) |
| *\*Mangifera* *indica* L. | Tree | Kushwaha 259801 (LWG) |
| *Semecarpus* *anacardium* L.f. | Tree | Kushwaha 259810 (LWG) |
| Annonaceae | *\*Annona squmosa* L. | Tree | Kushwaha 254696 (LWG) |
| *Miliusa tomentosa* (Roxb.) Sinclair | Tree | Kushwaha 259852 (LWG) |
| *\*Polyalthia longifolia* (Sonn.) Thw. | Tree | Kushwaha 254699 (LWG) |
| *Polyalthia suberosa* (Roxb.) Thwaites | Tree | Kushwaha 259881 (LWG) |
| Apiaceae | *\*Anethum* *graveolens* L. | Herb | Singh & Party EBH489 (LWG) |
| *Centella asiatica* (L.) Urban | Herb | Kushwaha 259883 (LWG) |
| *\*Coriandrum* *sativum* L. | Herb | Kushwaha 259878 (LWG) |
| Apocynaceae | *\*Alstonia scholaris* (L.) R. Br. | Tree | Kushwaha 254697 (LWG) |
| *Calotropis gigantea* (L.) R. Br. | Small tree | Kushwaha 304106 (LWG) |
| *Calotropis* *procera* (Aiton) Dryand. | Shrub | Kushwaha 259285 (LWG) |
| *\*Carissa carandas* L. | Small tree | Kushwaha 259812 (LWG) |
| *\*Cascabela* *thevetia* (L.) Lippold | Tree | Kushwaha 259819 (LWG) |
| *Carissa* *spinarum* L. | Shrub | Kushwaha 254363 (LWG) |
| *Catharanthus* *pusillus* (Murray) G.Don | Herb | Panigrahi 12587 (BSA) |
| *Holarrhena* *pubescens* Wall. ex G.Don | Tree | Kushwaha 259298 (LWG) |
| *Ichnocarpus* *frutescens* (L.) W.T.Aiton | Climber | Kushwaha 259849 (LWG) |
| *Oxystelma esculentum* (L.f.) Sm. | Climber | Kushwaha 304108 (LWG) |
| *\*Tabernaemontana* *divaricata* (L.) R.Br. ex Roem. & Schult | Tree | Kushwaha 259824 (LWG) |
| *Wrightia* arborea (Dennst.) Mabberley | Small tree | Kushwaha 304118 (LWG) |
| *Wrightia* *tinctoria* R.Br. | Tree | Kushwaha 254509 (LWG) |
| *\*Plumeria rubra* L. | Tree | Kushwaha 304122 (LWG) |
| *\*Plumeria alba* L. | Small tree | Kushwaha 304127 (LWG) |
| Aristolochiaceae | *Aristolochia* *indica* L. | Herb | Kushwaha 304131 (LWG) |
| Asclepiadaceae | *Ceropegia* *hirsuta* Wight & Arn. | Climber | Panigrahi 12577 (BSA) |
| *Cryptolepis* *dubia* (Burm.f.) M.R.Almeida | Climber | Panigrahi 9971 (BSA) |
| *Gymnema* *rivulare* Schltr. | Climber | Panigrahi 9660 (BSA) |
| *Hemidesmus* *indicus* (L.) R. Br. ex Schult. | Herb | Singh & Party EBH735 (LWG) |
| *Marsdenia* *tenacissima* (Roxb.) Moon | Woody climber | Mishra 9960 (BSA) |
| *Telosma* *pallida* (Roxb.) W. G. Craib | Shrub | Panigrahi 12380 (BSA) |
| Asteraceae | *Acanthospermum* *hispidum* DC. | Herb | Panigrahi 12329 (BSA) |
| *Acilepis* *aspera* (Buch.-Ham.) H.Rob. | Herb | Panigrahi 12083 (BSA) |
| *Acmella calva* (DC.) Jansen | Herb | Kushwaha 304197 (LWG) |
| *Ageratum* *conyzoides* (L.) L. | Herb | Kushwaha 304198 (LWG) |
| *Artemisia* *nilagirica* (C.B.Clarke) Pamp. | Herb | Panigrahi 12422 (BSA) |
| *Bidens* *pilosa* L. | Herb | Panigrahi 1090 (BSA) |
| *Blainvillea* *acmella* (L.) Philipson | Herb | Kushwaha 259259 (LWG) |
| *Blumea lacera DC.* | Herb | Panigrahi 13707 (BSA) |
| *Blumea* *axillaris* (Lam.) DC. | Herb | Kushwaha 259817 (LWG) |
| *Blumea* *fistulosa* (Roxb.) Kurz | Herb | Panigrahi 12051 (BSA) |
| *Blumea* *laciniata* (Wall. ex Roxb.) DC. | Herb | Panigrahi 13738 (BSA) |
| *Blumea* *oxyodonta* DC. | Herb | Kushwaha 304199 (LWG) |
| *Caesulia* *axillaris* Roxb. | Herb | Panigrahi 12559 (BSA) |
| *Carthamus* *oxyacantha* M.Bieb. | Herb | Panigrahi 12027 (BSA) |
| *\*Chrysanthellum* *indicum* DC. | Herb | Kushwaha 304191 (LWG) |
| *Conyza* *leucantha* (D.Don) Ludlow & P.H.Raven | Herb | Panigrahi 13644 (BSA) |
| *Cyanthillium* *cinereum* (L.) H.Rob. | Herb | Panigrahi 12065 (BSA) |
| *Cyathocline* *purpurea* (Buch.-Ham. ex D.Don) Kuntze | Herb | Kushwaha 259815 (LWG) |
| *Echinops echinatus* Roxb. | Herb | Kushwaha 259286 (LWG) |
| *Eclipta* *prostrata* L. | Herb | Kushwaha 254361 (LWG) |
| *Elephantopus* *scaber* L. | Herb | Kushwaha 264709 (LWG) |
| *Emilia* *sonchifolia* (L.) DC. ex DC. | Herb | Panigrahi 9692 (BSA) |
| *Gnaphalium* *polycaulon* Pers. | Herb | Kushwaha 254290 (LWG) |
| *Gnaphalium* *indicum* L. | Herb | Koul & Party 47388 (LWG) |
| *Grangea* *maderaspatana* (L.) Poir. | Herb | Panigrahi 12623 (BSA) |
| *Helichrysum* *indicum* (L.) Grierson | Herb | Panigrahi 13428 (BSA) |
| *Ixeris* *polycephala* Cass. | Herb | Srivastava & Party (LWG) |
| *Launaea acaulis* (Roxb.) Babc. ex Kerr. | Herb | Kushwaha 304192 (LWG) |
| *Launaea procumbens* (Roxb.) Ramaya & Rajgopal | Herb | Kushwaha 304196 (LWG) |
| *Parthenium* *hysterophorus* L. | Herb | Kushwaha 254364 (LWG) |
| *Pentanema* *indicum* (L.) Ling | Herb | Panigrahi 9614 (BSA) |
| *Pluchea* *indica* (L.) Less. | Herb | Kushwaha 259838 (LWG) |
| *Pulicaria* *crispa* Sch.Bip. | Herb | Panigrahi 9621 (BSA) |
| *Sonchus* *asper* (L.) Hill | Herb | Kushwaha 254279 (LWG) |
| *Sphaeranthus* *indicus* L. | Herb | Kushwaha 259805 (LWG) |
| *Tagetes* *erecta* L. | Herb | Singh & Party EBH 487 (LWG) |
| *Tridax* *procumbens* (L.) L. | Herb | Kushwaha 254597 (LWG) |
| *Xanthium strumarium* L. | Herb | Kushwaha 259773 (LWG) |
| Basellaceae | *Basella* *alba* L. | Climber | Kushwaha 304200 (LWG) |
| Bignoniaceae | *\*Handroanthus* *impetiginosus* (Mart. ex DC.) Mattos | Tree | Kushwaha 254292 (LWG) |
| *Fernandoa* *adenophylla* (Wall. ex G.Don) Steenis | Tree | Kushwaha 254694 (LWG) |
| *\*Jacaranda mimosifolia* D. Don | Tree | Kushwaha 259867 (LWG) |
| *Kigelia africana (Lam.) Benth.* | Tree | Kushwaha 254293 (LWG) |
| *\*Tabebuia rosea* DC. | Tree | Kushwaha 259867 (LWG) |
| *Tecoma stans* (L.) Juss. ex Kunth | Tree | Kushwaha 259820 (LWG) |
| Bombacaceae | *Bombax* *ceiba* L. | Tree | Kushwaha 259807 (LWG) |
| Boraginaceae | *Cordia dichotoma* G. Forst. | Tree | Kushwaha 259761 (LWG) |
| *Ehretia laevis* Roxb. | Tree | Kushwaha 259813 (LWG) |
| *Heliotropium* *indicum* L. | Herb | Kushwaha 259764 (LWG) |
| *Heliotropium* *ovalifolium* Forssk. | Herb | Mishra 9798 (BSA) |
| *Heliotropium* *supinum* L. | Herb | Panigrahi 9631 (BSA) |
| *Trichodesma* *indicum* (L.) Lehm. | Herb | Kushwaha 259808 (LWG) |
| Brassicaceae | *\*Brassica* *nigra* (L.) K.Koch | Shrub | Kushwaha 259766 (LWG) |
| *\*Brassica rapa* L. subsp. *campestris* (L.) Clapham | Herb | Kushwaha 254264 (LWG) |
| *Eruca vesicari* (L.) Cav. | Herb | Panigrahi 13911 (LWG) |
| *\*Raphanus sativus* L. | Herb | Kushwaha 254266 (LWG) |
| Burseraceae | *Boswellia* *serrata* Roxb. ex Colebr. | Tree | Kushwaha 259773 (LWG) |
| Caryophyllaceae | *Polycarpaea* *corymbosa* (L.) Lam. | Herb | Panigrahi 2220 (BSA) |
| *Polycarpon* *prostratum* (Forssk.) Asch. & Schweinf. | Herb | Mishra 9807 (BSA) |
| *Spergula* *arvensis* L. | Herb | Panigrahi 12630 (BSA) |
| *Vaccaria* *hispanica* (Mill.) Rauschert | Herb | Kushwaha 259767 (LWG) |
| Cactaceae | *Opuntia* *dillenii* (Ker Gawl.) Haw. | Shrub | Singh & Saha EBH 585 (LWG) |
| *Opuntia cochenillifera*(L.) Mill. | Shrub | Kushwaha 254267 (LWG) |
| *Opuntia* *stricta* (Haw.) Haw. | Shrub | Kushwaha 254293 (LWG) |
| Campanulaceae | *Lobelia* *alsinoides* Lam. | Herb | Kushwaha 259768 (LWG) |
| Cannabaceae | *Cannabis sativa* L. | Shrub | Kushwaha 254269 (LWG) |
| *Celtis australs*L. | Tree | Kushwaha 259769 (LWG) |
| *Celtis tetrandra* Roxb. | Tree | Kushwaha 254272 (LWG) |
| *Trema orientalis* (L.) Blume | Tree | Panigrahi & Prasad 2695 (BSA) |
| Capparidaceae | *Capparis* *zeylanica* L. | Shrub | Kushwaha 259809 (LWG) |
| Casuarinaceae | *Casuarina equisetifolia* L. | Tree | Kushwaha 259882 (LWG) |
| Celastraceae | *Cassine* *glauca* (Rottb.) Kuntze | Tree | Panigrahi 13648 (BSA) |
| *Celastrus* *paniculatus* Willd. | Shrub | Singh & Party 9336 (LWG) |
| Ceratophyllaceae | *Ceratophyllum* *demersum* L. | Herb | Kushwaha 259770 (LWG) |
| Chenopodiaceae | *Chenopodium* *murale* L. | Herb | Kushwaha 254273 (LWG) |
| *Chenopodium* *album* L. | Herb | Kushwaha 259771 (LWG) |
| *Dysphania ambrosioides* (L.) Mosyakin & Clemants | Herb | Kushwaha 254265 (LWG) |
| Cleomaceae | *Cleome* *gynandra* L. | Herb | Panigrahi 13574 (BSA) |
| *Cleome* *viscosa* L. | Herb | Panigrahi 13724 (BSA) |
| Combretaceae | *Anogeissus* *acuminata* (Roxb. ex DC.) Wall. ex Guillem. & Perr. | Tree | Kushwaha 254326 (LWG) |
| *Anogeissus* *latifolia* (Roxb. ex DC.) Wall. ex Guillem. & Perr. | Tree | Kushwaha 254510 (LWG) |
| *Terminalia* *elliptica* Willd | Tree | Kushwaha 254328 (LWG) |
| *Terminalia* *arjuna* (Roxb. ex DC.) Wight & Arn. | Tree | Kushwaha 254457 (LWG) |
| *Terminalia* *bellirica* (Gaertn.) Roxb. | Tree | Kushwaha 254475 (LWG) |
| Convolvulaceae | *Convolvulus arvensis* L. | Herb | Kushwaha 259292 (LWG) |
| *Cuscuta reflexa* Roxb. | Climber | Kushwaha 254270 (LWG) |
| *Erycibe* *paniculata* Roxb. | Woody climber | Panigrahi 2260 (BSA) |
| *Evolvulus* *alsinoides* (L.) L. | Herb | Mishra 9794 (BSA) |
| *Evolvulus* *nummularius* (L.) L. | Herb | Kushwaha 259848 (LWG) |
| *Ipomoea* *aquatica* Forssk. | Herb | Panigrahi 2240 (BSA) |
| *\*Ipomoea batatas*(L.)Lam. | Climber | Kushwaha 259772 (LWG) |
| *Ipomoea cairica*(L.)Sweet | Climber | Kushwaha 259291 (LWG) |
| *Ipomoea* *carnea* Jacq. | Shrub | Kushwaha 254356 (LWG) |
| *Ipomoea* *dichroa* Choisy | Climber | Panigrahi 12537 (BSA) |
| *Ipomoea* *nil* (L.) Roth | Climber | Panigrahi 12382 (BSA) |
| *Ipomoea obscura (L.) Ker Gawl.* | Herb | Kushwaha 254271 (LWG) |
| *Ipomoea pes-tigridis*L. | Herb | Kushwaha 259775 (LWG) |
| *Ipomoea quamoclit*L. | Herb | Kushwaha 254277 (LWG) |
| *Merremia hederacea*(Burm. f.) Hallier f. | Herb | Kushwaha 259781 (LWG) |
| *Operculina* *turpethum* (L.) Silva Manso | Climber | Kushwaha 254278 (LWG) |
| *Porana* *paniculata* Roxb. | Climber | Mishra 2237 (BSA) |
| Cornaceae | *Alangium* *salviifolium* (L.f.) Wangerin | Tree | Kushwaha 254274 (LWG) |
| Cucurbitaceae | *\*Benincasa* *hispida* (Thunb.) Cogn. | Climber | Kushwaha 254303 (LWG) |
| *Cayaponia* *laciniosa* (L.) C.Jeffrey | Climber | Kushwaha 254396 (LWG) |
| *Citrullus colocynthis* (L.) Schrad. | Herb | Kushwaha 259885 (LWG) |
| *\*Citrullus lanatus* (Thunb.)Matsumara & Nakai | Herb | Kushwaha 254445 (LWG) |
| *Coccinia grandis* (L.) Voigt | Herb | Kushwaha 259880 (LWG) |
| *Cucumis* *sativus* L. | Herb | Kushwaha 254302 (LWG) |
| *\*Cucumis* *melo* L. | Herb | Kushwaha 254423 (LWG) |
| *\*Cucumis* *melo* L. subsp. *agrestis* ( Naudin ) Pangalo | Herb | Kushwaha 259273 (LWG) |
| *\*Cucurbita maxima* Duch. | Herb | Kushwaha 254596 (LWG) |
| *Diplocyclos* *palmatus* (L.) C.Jeffrey | Herb | Kushwaha 254396 (LWG) |
| *\*Lagenaria* *siceraria* (Molina) Standl. | Herb | Kushwaha 254280 (LWG) |
| *\*Luffa* *hermaphrodita* Singh & Bandhari | Herb | Kushwaha 254431 (LWG) |
| *\*Luffa* *acutangula* (L.) Roxb. | Herb | Kushwaha 254320 (LWG) |
| *\*Luffa* *cylindrica* (L.) M.Roem. | Herb | Kushwaha 259802 (LWG) |
| *\*Momordica* *charantia* L. | Herb | Kushwaha 254433 (LWG) |
| *Momordica* *dioica* Roxb. ex Willd. | Herb | Kushwaha 254304 (LWG) |
| *\*Mukia* *maderaspatana* (L.) M.Roem. | Herb | Kushwaha 254310 (LWG) |
| *\*Trichosanthes* *cucumerina* L. | Climber | Kushwaha 254429 (LWG) |
| *Trichosanthes cucumerina* L. var. *anguina* (L.) Haines | Climber | Kushwaha 254437 (LWG) |
| *\*Trichosanthes* *dioica* Roxb. | Herb | Kushwaha 254426 (LWG) |
| Dipterocarpaceae | *Shorea* *robusta* Gaertn. | Tree | Kushwaha 259826 (LWG) |
| Ebenaceae | *Diospyros* *melanoxylon* Roxb. | Small tree | Kushwaha 254523 (LWG) |
| *Diospyros* *montana* Roxb. | Small tree | Kushwaha 254487 (LWG) |
| Elatinaceae | *Bergia* *ammannioides* Roxb. ex Roth | Herb | Shrivastava 21670 (LWG) |
| Euphorbiaceae | *Acalypha* *ciliata* Forssk. | Herb | Panigrahi 12233 (BSA) |
| *Baliospermum* *solanifolium* (Burm.) Suresh | Shrub | Panigrahi 12634 (BSA) |
| *Chrozophora* *rottleri* (Geiseler) A.Juss. ex Spreng. | Herb | Kushwaha 304194 (LWG) |
| *Croton bonplandianus*Baill. | Herb | Kushwaha 254352 (LWG) |
| *Euphorbia* *hirta* L. | Herb | Kushwaha 304189 (LWG) |
| *Euphorbia* *hypericifolia* L. | Herb | Panigrahi 13413 (BSA) |
| *Euphorbia* *prostrata* Aiton | Herb | Kushwaha 304193 (LWG) |
| *Jatropha* *gossypiifolia* L. | Shrub | Kushwaha 304190 (LWG) |
| *Mallotus* *nudiflorus* (L.) Kulju & Welzen | Tree | Kushwaha 254294 (LWG) |
| *Mallotus* *philippensis* (Lam.) Müll.Arg. | Tree | Kushwaha 2598621 (LWG) |
| *Microstachys* *chamaelea* (L.) Müll.Arg. | Herb | Panigrahi 2017 (BSA) |
| *Ricinus* *communis* L. | Shrub | Kushwaha 304188 (LWG) |
| Fabaceae-Caesalpinioideae | *Bauhinia* *malabarica* Roxb. | Tree | Kushwaha 254378 (LWG) |
| *Bauhinia* *purpurea* L. | Tree | Kushwaha 259242 (LWG) |
| *Bauhinia* *racemosa* Lam. | Tree | Kushwaha 259251 (LWG) |
| *Bauhinia* *semla* Wunderlin | Tree | Kushwaha & Chaudhary 259831 (LWG) |
| *Bauhinia* *vahlii* Wight & Arn. | Tree | Panigrahi 13825 (BSA) |
| *Bauhinia* *variegata* L. | Tree | Kushwaha 259263 (LWG) |
| *Cassia* *fistula* L. | Tree | Kushwaha 254376 (LWG) |
| *Chamaecrista* *absus* (L.) H.S.Irwin & Barneby | Tree | Chaudhary & Kushwaha 259265 (LWG) |
| *Chamaecrista* *mimosoides* (L.) Greene | Herb | Panigrahi 12208 (BSA) |
| *\*Delonix* *regia* (Hook.) Raf. | Tree | Chaudhary & Kushwaha 259855 (LWG) |
| *Hardwickia* *binata* Roxb. | Tree | Kushwaha 254324 (LWG) |
| *Parkinsonia aculeata* L. | Small tree | Kushwaha 259261 (LWG) |
| *\*Peltophorum* *pterocarpum* (DC.) K.Heyne | Tree | Kushwaha 254297 (LWG) |
| *Piliostigma* *malabaricum* (Roxb.) Benth. | Tree | Kushwaha & Srivastava 259261 (LWG) |
| *Senna* *alata* (L.) Roxb. | Shrub | Kushwaha 254298 (LWG) |
| *Senna* *occidentalis* (L.) Link | Herb | Panigrahi 12357 (BSA) |
| *Senna* *siamea* (Lam.) H.S.Irwin & Barneby | Tree | Kushwaha 259260 (LWG) |
| *Senna* *tora* (L.) Roxb. | Herb | Kushwaha 254340 (LWG) |
| Fabaceae-Mimosoideae | *\*Acacia* *auriculiformis* Benth. | Tree | Kushwaha 254373 (LWG) |
| *Acacia* *catechu* (L.f.) Willd. | Tree | Kushwaha 254366 (LWG) |
| *Acacia* *nilotica* (L.) Delile | Tree | Kushwaha 259294 (LWG) |
| *Acacia* *pinnata* Link | Tree | Chaudhary & Kushwaha 259294 (LWG) |
| *Acacia* *torta* (Roxb.) Craib | Tree | Panigrahi 4131 (BSA) |
| *Albizia* *lebbeck* (L.) Benth. | Tree | Kushwaha 264785 (LWG) |
| *Albizia* *procera* (Roxb.) Benth. | Tree | Kushwaha 254288 (LWG) |
| *Albizia* *odoratissima* (L.f.) Benth. | Tree | Panigrahi 13538 (BSA) |
| *Dichrostachys* *cinerea* (L.) Wight & Arn. | Tree | Kushwaha 254295 (LWG) |
| *Leucaena* *leucocephala* (Lam.) de Wit | Tree | Kushwaha 254504 (LWG) |
| *Mimosa* *himalayana* Gamble | Small tree | Panigrahi 13929 (BSA) |
| *Mimosa* *rubicaulis* Lam. | Small tree | Panigrahi 13771 (BSA) |
| *Pithecellobium* *dulce* (Roxb.) Benth. | Tree | Kushwaha 259834 (LWG) |
| *Prosopis* *cineraria* (L.) Druce | Tree | Kushwaha 259862 (LWG) |
| *Prosopis* *juliflora* (Sw.) DC. | Small tree | Kushwaha 259290 (LWG) |
| Fabaceae-Papilionoideae | *Abrus* *precatorius* L. | Tree | Singh & Party 9335 (LWG) |
| *Aeschynomene* *indica* L. | Herb | Panigrahi 12268 (BSA) |
| *Atylosia scarabaeoides* (L.) Benth. | Herb | Kushwaha 264734 (LWG) |
| *Alhagi* *maurorum* Medik. | Shrub | Kushwaha 304144 (LWG) |
| *Alysicarpus* *bupleurifolius* (L.) DC. | Herb | Kushwaha 304109 (LWG) |
| *Alysicarpus* *glumaceus* (Vahl) DC. | Herb | Panigrahi 13596 (BSA) |
| *Alysicarpus* *hamosus* Edgew. | Herb | Panigrahi 13936 (BSA) |
| *Alysicarpus* *monilifer* (L.) DC. | Herb | Mishra 9896 (BSA) |
| *Alysicarpus* *vaginalis* (L.) DC. | Herb | Kushwaha 264724 (LWG) |
| *Butea* *monosperma* (Lam.) Taub. | Tree | Kushwaha 259287 (LWG) |
| *\*Cajanus* *cajan* (L.) Millsp. | Shrub | Kushwaha 259287 (LWG) |
| *Cajanus* *platycarpus* (Benth.) Maesen | Herb | Singh at al. EBH 513 (LWG) |
| *Cajanus* *scarabaeoides* (L.) Thouars | Herb | Panigrahi 12288 (BSA) |
| *\*Cicer* *arietinum* L. | Herb | Singh at al. EBH 601 (LWG) |
| *Clitoria* *ternatea* L. | Herb | Panigrahi 13837 (BSA) |
| *Codariocalyx* *motorius* (Houtt.) H.Ohashi | Shrub | Panigrahi 11129 (BSA) |
| *Crotalaria* *albida* Roth | Shrub | Kushwaha 254517 (LWG) |
| *Crotalaria* *spectabilis* Roth | Herb | Kushwaha 304119 (LWG) |
| *\*Crotalaria* *juncea* L. | Shrub | Singh & Party EHB 518 (LWG) |
| *Crotalaria* *medicaginea* Lam. | Herb | Kushwaha 264702 (LWG) |
| *Crotalaria* *mysorensis* Roth | Herb | Chaudhary & Dutt 264702 (LWG) |
| *Crotalaria* *prostrata* Willd. | Herb | Kushwaha 264737 (LWG) |
| *Crotalaria* *quinquefolia* L. | Herb | Chaudhary & Dutt 264717 (LWG) |
| *Daldergia sisso* DC. | Tree | Kushwaha 259296 (LWG) |
| *Dalbergia* *lanceolaria* L.f. | Tree | Kushwaha & Bajpai 259296 (LWG) |
| *Dalbergia* *latifolia* Roxb. | Tree | Mishra 9817 (BSA) |
| *Desmodium oojenenensis* (Roxb.) H. Ohasi | Tree | Kushwaha 259276 (LWG) |
| *Desmodium* *dichotomum* (Willd.) DC. | Herb | Kushwaha 259879 (LWG) |
| *Desmodium polycarpum* (Poir.) DC. | Herb | Kushwaha 254338 (LWG) |
| *Desmodium* *gangeticum* (L.) DC. | Herb | Kushwaha 259811 (LWG) |
| *Desmodium* *heterocarpon* (L.) DC. | Shrub | Kushwaha & Srivastava 259811 (LWG) |
| *Desmodium* *triflorum* (L.) DC. | Shrub | Panigrahi 3633 (BSA) |
| *Desmodium velutinum* (willd.) DC | Herb | Kushwaha 264756 (LWG) |
| *Erythrina* *stricta* Roxb. | Tree | Kushwaha 254441 (LWG) |
| *Erythrina* *suberosa* Roxb. | Herb | Kushwaha 254441 (LWG) |
| *Flemingia* *strobilifera* (L.) W.T.Aiton | Shrub | Panigrahi 8427 (BSA) |
| *Indigofera* *astragalina* DC. | Tree | Chaudhary & Kushwaha 259246 (LWG) |
| *Indigofera* *cassioides* DC. | Tree | Panigrahi 13769 (BSA) |
| *Indigofera* *hirsuta* L. | Herb | Panigrahi 8496 (BSA) |
| *Indigofera* *linifolia* (L.f.) Retz. | Herb | Kushwaha 264790 (LWG) |
| *Indigofera* *linnaei* Ali | Shrub | Chaudhary & Dutt 264790 (LWG) |
| *Indigofera* *tinctoria* L. | Shrub | Panigrahi 12397 (BSA) |
| *Indigofera* *trita* L.f. | Herb | Panigrahi 13516 (BSA) |
| *\*Lablab* *purpureus* (L.) Sweet | Herb | Kushwaha 259803 (LWG) |
| *Lathyrus* *aphaca* L. | Herb | Singh at al. 9344 (LWG) |
| *Lathyrus* *sativus* L. | Herb | Singh 1867 (LWG) |
| *Medicago* *polymorpha* L. | Herb | Kushwaha 254375 (LWG) |
| *Melilotus* *indicus* (L.) All. | Herb | Panigrahi 9651 (BSA) |
| *Millettia* *extensa* (Benth.) Baker | Herb | Panigrahi 13929 (BSA) |
| *Millettia* *peguensis* Ali | Tree | Kushwaha 254296 (LWG) |
| *Mucuna* *pruriens* (L.) DC. | Climber | Kushwaha 264705 (LWG) |
| *Phyllodium* *pulchellum* (L.) Desv. | Shrub | Chaudhary & Dutt 264705 (LWG) |
| *Pongamia* *pinnata* (L.) Pierre | Tree | Kushwaha 254693 (LWG) |
| *Pterocarpus* *marsupium* Roxb. | Tree | Kushwaha 259253 (LWG) |
| *Rhynchosia* *capitata* (Roth) DC. | Herb | Panigrahi 12346 (BSA) |
| *Rhynchosia* *minima* (L.) DC. | Herb | Panigrahi 12357 (BSA) |
| *Sesbania* *bispinosa* (Jacq.) W.Wight | Herb | Kushwaha 254340 (LWG) |
| *Sesbania* *sesban* (L.) Merr. | Shrub | Panigrahi 13892 (BSA) |
| *Smithia* *conferta* Sm. | Herb | Panigrahi 13694 (BSA) |
| *Tephrosia* *pumila* (Lam.) Pers. | Herb | Panigrahi 13883 (BSA) |
| *Tephrosia* *purpurea* (L.) Pers. | Herb | Kushwaha 254365 (LWG) |
| *Tephrosia* *strigosa* (Dalzell) Santapau & Maheshw. | Herb | Kushwaha 254365 (LWG) |
| *Teramnus* *labialis* (L.f.) Spreng. | Herb | Panigrahi 13742 (BSA) |
| *Trifolium* *alexandrinum* L. | Herb | Panigrahi 13742 (BSA) |
| *\*Trigonella foenum-graecum* L. | Herb | Panigrahi 12098 (BSA) |
| *Uraria* *lagopodoides* (L.) DC. | Herb | Panigrahi 13654 (BSA) |
| *Uraria* *lagopus* var. *neglecta* (Prain) H.Ohashi | Herb | Panigrahi 13654 (BSA) |
| *Uraria* *picta* (Jacq.) DC. | Herb | Kushwaha 254401 (LWG) |
| *Vicia* *hirsuta* (L.) Gray | Herb | Panigrahi 9626 (BSA) |
| *Vicia* *sativa* L. | Herb | Singh & Saha EBH 600 (LWG) |
| *Vigna* *aconitifolia* (Jacq.) Marechal | Herb | Panigrahi 12321 (BSA) |
| *\*Vigna* *mungo* (L.) Hepper | Herb | Kushwaha 254358 (LWG) |
| *\*Vigna* *radiata* (L.) R.Wilczek | Herb | Kushwaha 264755 (LWG) |
| *Vigna* *trilobata* (L.) Verdc. | Herb | Panigrahi 2236 (BSA) |
| *\*Vigna* *umbellata* (Thunb.) Ohwi & H.Ohashi | Herb | Panigrahi 12496 |
| *Zornia* *gibbosa* Span. | Herb | Panigrahi 12317 (BSA) |
| *Zornia glochidiata* DC. | Herb | Chaudhary & Datt 264748 (LWG) |
| Gesneriaceae | *Didymocarpus* *pygmaeus* C.B.Clarke | Herb | Panigrahi 12231 (BSA) |
| Gentianaceae | *Canscora* *alata* (Roth) Wall. | Herb | Kushwaha 259821 (LWG) |
| *Canscora* *diffusa* (Vahl) R.Br. ex Roem. & Schult. | Herb | Kushwaha 264792 (LWG) |
| *Hoppea* *dichotoma* Willd. | Herb | Kushwaha 264792 (LWG) |
| *Swertia* *ciliata* (D. Don ex G. Don) B.L. Burtt | Herb | Panigrahi 2097 (BSA) |
| Hydrophyllaceae | *Hydrolea* *zeylanica* (L.) Vahl | Herb | Panigrahi 13860 (BSA) |
| Lamiaceae | *Anisomeles* *indica* (L.) Kuntze | Herb | Panigrahi 13680 (BSA) |
| *Hyptis* *suaveolens* (L.) Poit. | Herb | Kushwaha 259256 (LWG) |
| *Leonotis* *nepetifolia* (L.) R.Br. | Herb | Panigrahi 2232 (BSA) |
| *Leucas* *aspera* (Willd.) Link | Herb | Panigrahi 12067 (BSA) |
| *Leucas* *cephalotes* (Roth) Spreng. | Herb | Kushwaha 254500 (LWG) |
| *Ocimum* *americanum* L. | Herb | Kushwaha 254343 (LWG) |
| *Ocimum* *basilicum* L. | Herb | Kushwaha 254499 (LWG) |
| *Ocimum* *tenuiflorum* L. | Herb | Kushwaha 259274 (LWG) |
| *Orthosiphon* *pallidus* Royle ex Benth. | Herb | Kushwaha 259274 (LWG) |
| *Premna* *herbacea* Roxb. | Herb | Panigrahi 2098 (BSA) |
| *Salvia* *plebeia* R.Br. | Herb | Kushwaha 254498 (LWG) |
| Lauraceae | *Litsea* *glutinosa* (Lour.) C.B.Rob. | Tree | Kushwaha 254598 (LWG) |
| *Litsea monopetala* (Roxb.) Pers. | Tree | Kushwaha 254496 (LWG) |
| Lecythidaceae | *Barringtonia* *acutangula* (L.) Gaertn. | Tree | Mishra 9831 (BSA) |
| *Careya* *arborea* Roxb. | Tree | Singh & Party 7631 (LWG) |
| Lentibulariaceae | *Utricularia* *aurea* Lour. | Herb | Panigrahi 13486 (BSA) |
| Linaceae | *\*Linum* *usitatissimum* L. | Herb | Kushwaha 304124 (LWG) |
| Linderniaceae | *Lindernia* *anagallis* (Burm.f.) Pennell | Herb | Kushwaha 304111 (LWG) |
| *Lindernia* *ciliata* (Colsm.) Pennell | Herb | Kushwaha 304114 (LWG) |
| *Lindernia crustacea* (L.) F.Muell. | Herb | Kushwaha 304145 (LWG) |
| Loranthaceae | *Dendrophthoe* *falcata* (L.f.) Ettingsh. | Shrub | Panigrahi 9682 (BSA) |
| *Loranthus philippinensis* Cham. & Schlecht., extract | Shrub | Panigrahi 13527 (BSA) |
| *Taxillus* *tomentosus* Tiegh. | Shrub | Panigrahi 12036 (BSA) |
| Lythraceae | *Ammannia* *baccifera* L. | Herb | Kushwaha 304146 (LWG) |
| *Ammannia* *multiflora* Roxb. | Herb | Panigrahi 12573 (BSA) |
| *Lagerstroemia* *indica* L | Shrub | Kushwaha 254299 (LWG) |
| *Lagerstroemia* *parviflora* Roxb. | Tree | Kushwaha 259264 (LWG) |
| *\*Lagerstroemia speciosa* (L.) Pers. | Tree | Kushwaha 254300 (LWG) |
| *Lawsonia* *inermis* L. | Shrub | Singh 1878 (LWG) |
| *Rotala* *indica* (Willd.) Koehne | Herb | Kushwaha 304147 (LWG) |
| *Trapa* *natans* L. | Herb | Kushwaha 304150 (LWG) |
| *Woodfordia* *floribunda* Salisb. | Shrub | Panigrahi 1864 (BSA) |
| *Woodfordia* *fruticosa* (L.) Kurz | Shrub | Kushwaha 259832 (LWG) |
| Malvaceae | *Abelmoschus* *manihot* (L.) Medik. | Herb | Kushwaha 304151 (LWG) |
| *\*Abelmoschus* *moschatus* Medik. | Herb | Kushwaha 304139 (LWG) |
| *\*Abelmoschus* *crinitus* Wall. | Shrub | Singh & Party EBH 7626 (LWG) |
| *\*Abelmoschus* *esculentus* (L.) Moench | Shrub | Maheshwari & Saha EBH 733 (LWG) |
| *Abutilon ramosum* (Cav.) Guill. & Perr. | Shrub | Kushwaha 304152 (LWG) |
| *Abutilon* *indicum* (L.) Sweet | Shrub | Kushwaha 259275 (LWG) |
| *Byttneria* *herbacea* Roxb. | Shrub | Chaudhary & Datt 264723 (LWG) |
| *\*Ceiba* *pentandra* (L.) Gaertn. | Tree | Kushwaha 259889 (LWG) |
| *Corchorus aestuans* L. | Herb | Kushwaha 264769 (LWG) |
| *Corchorus capsulari*s L. | Herb | Kushwaha 264769 (LWG) |
| *Corchorus* *tridens* L. | Herb | Kushwaha 259890 (LWG) |
| *Corchorus olitorius* L. | Herb | Panigrahi 13877 (BSA) |
| *Grewia* *asiatica* L. | Tree | Kushwaha 304153 (LWG) |
| *Grewia* *hirsuta* Vahl | Tree | Kushwaha 264760 (LWG) |
| *Grewia* *tiliifolia* Vahl | Tree | Kushwaha 264760 (LWG) |
| *Hibiscus* *cannabinus* L. | Shrub | Panigrahi 12602 (BSA) |
| *Hibiscus* *lobatus* (Murray) Kuntze | Herb | Mishra 9950 (BSA) |
| *Hibiscus* *micranthus* L.f. | Shrub | Panigrahi 13937 (BSA) |
| *Hibiscus mutabilis* L. | Shrub | Kushwaha 304154 (LWG) |
| *Hibiscus* *panduriformis* Burm.f. | Shrub | Panigrahi 13878 (BSA) |
| *Hibiscus* *sabdariffa* L. | Herb | Singh & Party EBH 545 (LWG) |
| *Kydia* *calycina* Roxb. | Tree | Panigrahi 12480 (BSA) |
| *Malvastrum* *coromandelianum* (L.) Garcke | Herb | Kushwaha 304142 (LWG) |
| *Pavonia* *cancellata* (L.) Cav. | Herb | Panigrahi 2698 (BSA) |
| *Pterospermum* *acerifolium* (L.) Willd. | Tree | Kushwaha 259893 (LWG) |
| *Sida* *cordata* (Burm.f.) Borss.Waalk. | Shrub | Kushwaha 259236 (LWG) |
| *Sida* *cordifolia* L. | Shrub | Shrivastava 21670 (LWG) |
| *Sida* *spinosa* L. | Herb | Panigrahi 9612 (BSA) |
| *Sida* *acuta* Burm.f. | Herb | Panigrahi 13518 (BSA) |
| *Sida* *rhombifolia* L. | Herb | Saha & Party EBH246 (LWG) |
| *Thespesia* *populnea* (L.) Sol. ex Corrêa | Tree | Kushwaha 259894 (LWG) |
| *Triumfetta pentandra* A. Rich. | Shrub | Kushwaha 264706 (LWG) |
| *Urena* *lobata* L. | Herb | Kushwaha 259264 (LWG) |
| Martyniaceae | *Martynia annua* L. | Herb | Kushwaha 264775 (LWG) |
| Meliaceae | *Azadirachta indica* A. Juss. | Tree | Kushwaha 259282 (LWG) |
| *Melia* *azedarach* L. | Tree | Kushwaha 259863 (LWG) |
| *Soymida* *febrifuga* (Roxb.) A. Juss. | Tree | Kushwaha 259217 (LWG) |
| *Toona ciliata* M. Roem. | Tree | Kushwaha 259271 (LWG) |
| Menispermaceae | *Cissampelos* *pareira* L. | Shrub | Kushwaha 254331 (LWG) |
| *Cocculus* *diversifolius* DC. | Climber | Kushwaha 304148 (LWG) |
| *Cocculus* *hirsutus* (L.) W.Theob. | Climber | Kushwaha 259288 (LWG) |
| *Tinospora cordifolia* (Willd.) Miers | Climber | Kushwaha 304155 (LWG) |
| Menyanthaceae | *Nymphoides* *cristata* (Roxb.) Kuntze | Herb | Kushwaha 304149 (LWG) |
| Moraceae | *\*Artocarpus* *heterophyllus* Lam. | Tree | Kushwaha 254494(LWG) |
| *\*Artocarpus* *lacucha* Buch.-Ham | Tree | Kushwaha 304156 (LWG) |
| *Ficus* *benghalensis* L. | Tree | Kushwaha 254533 (LWG) |
| *\*Ficus* *benjamina* L. | Small tree | Kushwaha 254281 (LWG) |
| *\*Ficus* *elastica* Roxb. ex Hornem | Tree | Kushwaha 259895 (LWG) |
| *Ficus* *hispida* L.f. | Tree | Kushwaha 304157 (LWG) |
| *Ficus* *palmata* Forssk. | Small tree | Kushwaha 304158 (LWG) |
| *Ficus* *pumila* L. | Climber | Kushwaha 304163 (LWG) |
| *Ficus* *racemosa* L. | Tree | Kushwaha 254286 (LWG) |
| *Ficus* *religiosa* L. | Tree | Kushwaha 254351 (LWG) |
| *Ficus* *virens* Aiton | Tree | Kushwaha 254282 (LWG) |
| *\*Morus* *alba* L. | Tree | Kushwaha 254287 (LWG) |
| *Morus* *indica* L. | Tree | Kushwaha 254284 (LWG) |
| *Streblus* *asper* Lour. | Tree | Kushwaha 254291 (LWG) |
| Moringaceae | *\*Moringa* *oleifera* Lam. | Tree | Kushwaha 304165 (LWG) |
| Myrsinaceae | *Embelia* *tsjeriam-cottam* (Roem. & Schult.) A.DC. | Tree | Panigrahi 4126 (BSA) |
| Myrtaceae | *\*Callistemon citrinus* (Curtis) Skeels | Tree | Kushwaha 304159 (LWG) |
| *\*Eucalyptus tereticornis* Sm. | Tree | Kushwaha 304161 (LWG) |
| *\*Psidium guajava* L. | Tree | Kushwaha 254357 (LWG) |
| *Syzygium* *cumini* (L.) Skeels | Tree | Kushwaha 264775 (LWG) |
| *Syzygium* *salicifolium* (Wight) J.Graham | Tree | Kushwaha 254493 (LWG) |
| Nyctaginaceae | *Boerhavia* *diffusa* L. | Herb | Singh 9364 (LWG) |
| *Boerhavia* *chinensis* (L.) Rottb. | Herb | Kushwaha 304162 (LWG) |
| *Boerhavia* *repens* L. | Herb | Panigrahi 13731 (BSA) |
| *\*Bougainvillea glabra* Choisy in DC. | Shrub | Kushwaha 304164 (LWG) |
| *Mirabilis* *jalapa* L. | Herb | Kushwaha 259897 (LWG) |
| Nymphaeceae | *Nymphaea nouchali* Burm. f. | Herb | Kushwaha 304170 (LWG) |
| *Nymphaea pubescens* Willd. | Herb | Kushwaha 304160 (LWG) |
| Olacaceae | *Olax* *scandens* Roxb. | Shrub | Panigrahi 2669 (BSA) |
| Oleaceae | *Jasminum multiflorum* (Burm. f.) Andrews | Shrub | Kushwaha 304166 (LWG) |
| *Jasminum* *arborescens* Roxb. | Shrub | Mishra 9904 (BSA) |
| *Nyctanthes* *arbor-tristis* L. | Small tree | Kushwaha 254413 (LWG) |
| Onagraceae | *Ludwigia octovalis* (Jacq.) P.H.Raven | Herb | Panigrahi 12651 (BSA) |
| *Ludwigia perennis* L. | Herb | Panigrahi 13751 (BSA) |
| Orobanchaceae | *Orobanche* *aegyptiaca* Pers. | Herb | Kushwaha 304171 (LWG) |
| Oxalidaceae | *\*Averrhoa carambola* L. | Tree | Kushwaha 304175 (LWG) |
| *Biophytum* *reinwardtii* (Zucc.) Klotzsch | Herb | Kushwaha 259783 (LWG) |
| *Biophytum sensitivum* (L.) DC. | Herb | Kushwaha 264732 (LWG) |
| *Oxalis* *corniculata* L. | Herb | Kushwaha 254463 (LWG) |
| Papaveraceae | *Argemone* *mexicana* L. | Herb | Kushwaha 304169 (LWG) |
| *Fumaria* *indica* (Hausskn.) Pugsley | Herb | Kushwaha 304176 (LWG) |
| Pedaliaceae | *Sesamum* *mulayanum* N.C.Nair | Herb | Kushwaha 254329 (LWG) |
| *\*Sesamum* *indicum* L. | Herb | Panigrahi 13803 (BSA) |
| Phyllanthaceae | *Bridelia retusa* (L.) A. Juss. | Tree | Mishra 9993 (BSA) |
| *Cleistanthus* *collinus* (Roxb.) Benth. ex Hook.f. | Tree | Kushwaha 304178 (LWG) |
| *Flueggea* *virosa* (Roxb. ex Willd.) Royle | Shrub | Kushwaha 264712 (LWG) |
| *Phyllanthus emblica* L. | Tree | Kushwaha 264733 (LWG) |
| *Phyllanthus urinaria* L. | Herb | Panigrahi 6556 (BSA) |
| *Phyllanthus virgatus* G. Forst. | Herb | Kushwaha 304172 (LWG) |
| *Phyllanthus* *reticulatus* Poir. | Small tree | Kushwaha 254313 (LWG) |
| Plantaginaceae | *Lindenbergia* *indica* Vatke | Herb | Panigrahi 13921 (BSA) |
| *Scoparia* *dulcis* L. | Herb | Mishra 9754 (BSA) |
| Plumbaginaceae | *Plumbago* *zeylanica* L. | Herb | Kushwaha 304145 (LWG) |
| Putranjivaceae | *Putranjiva* *roxburghii* Wall. | Tree | Kushwaha 259898 (LWG) |
| Polygalaceae | *Polygala* *chinensis* L. | Herb | Mishra 9964 (BSA) |
| *Polygala* *longifolia* Poir. | Herb | Panigrahi 12070 (BSA) |
| *Polygala arvensis* Willd. | Herb | Kushwaha 304173 (LWG) |
| Polygonaceae | *Antigonon leptopus* Hook. & Arn. | Climber | Kushwaha 304167 (LWG) |
| *Persicaria* *barbata* (L.) H.Hara | Herb | Kushwaha 304177 (LWG) |
| *Persicaria* *hydropiper* (L.) Delarbre | Herb | Kushwaha 304181 (LWG) |
| *Polygonum* *aviculare* L. | Herb | Kushwaha 259804 (LWG) |
| *Polygonum* *plebeium* R.Br. | Herb | Kushwaha 254467 (LWG) |
| *Rumex* *dentatus* L. | Herb | Kushwaha 304179 (LWG) |
| Portulacaceae | *Portulaca* *oleracea* L. | Herb | Kushwaha 254464 (LWG) |
| Primulaceae | *Anagallis* *arvensis* L. | Herb | Kushwaha 254470 (LWG) |
| Punicaceae | *\*Punica* *granatum* L. | Small tree | Kushwaha 254402 (LWG) |
| Ranunculaceae | *Ranunculus* *sceleratus* L. | Herb | Kushwaha 254469 (LWG) |
| *Ranunculus* *scleratoides* Perfil. ex Ovczinn. | Herb | Kushwaha 304174 (LWG) |
| Rhamnaceae | *Ventilago* *maderaspatana* Gaertn. | Tree | Saha & Party EBH257 (LWG) |
| *Ziziphus* *nummularia* (Burm.f.) Wight & Arn. | Small tree | Kushwaha 254446 (LWG) |
| *Ziziphus* *oenopolia* (L.) Mill. | Small tree | Kushwaha 254325 (LWG) |
| *Ziziphus* *jujuba* Mill. | Small tree | Kushwaha 254470 (LWG) |
| *Ziziphus* *xylopyrus* (Retz.) Willd. | Small tree | Kushwaha 254316 (LWG) |
| Rubiaceae | *Catunaregam* *longispina* (Link) Tirveng. | Small tree | Panigrahi & Prasad 9979 (BSA) |
| *Ceriscoides* *turgida* (Roxb.) Tirveng. | Tree | Kushwaha 259840 (LWG) |
| *Dentella* *repens* (L.) J.R.Forst. & G.Forst. | Herb | Mishra 9801 (BSA) |
| *Gardenia* *latifolia* Aiton | Tree | Kushwaha 259822 (LWG) |
| *Haldina* *cordifolia* (Roxb.) Ridsdale | Tree | Kushwaha 259270 (LWG) |
| *Knoxia* *sumatrensis* (Retz.) DC. | Herb | Panigrahi 12490 (BSA) |
| *Mitragyna* *parvifolia* (Roxb.) Korth | Tree | Kushwaha 259842 (LWG) |
| *\*Neolamarckia* *cadamba* (Roxb.) Bosser | Tree | Kushwaha 259899 (LWG) |
| *Spermadictyon* *suaveolens* Roxb. | Herb | Panigrahi 13593 (BSA) |
| *Oldenlandia* *diffusa* (Willd.) Roxb. | Herb | Kushwaha 254471 (LWG) |
| *Oldenlandia* *corymbosa* L. | Herb | Kushwaha 304168 (LWG) |
| *Oldenlandia* *herbacea* (L.) Roxb. | Herb | Panigrahi 12596 (BSA) |
| *Spermacoce* *articularis* L.f. | Herb | Panigrahi 12565 (BSA) |
| *Tamilnadia* *uliginosa* (Retz.) Tirveng. & Sastre | Small tree | Mishra 9979 (BSA) |
| *Wendlandia* *heynei* (Schult.) Santapau & Merchant | Tree | Kushwaha 259267 (LWG) |
| Rutaceae | *Aegle* *marmelos* (L.) Corrêa | Tree | Kushwaha 254474 (LWG) |
| *\*Citrus* *limon* (L.) Osbeck | Tree | Kushwaha 254468 (LWG) |
| *\*Citrus* *medica* L. | Tree | Kushwaha 254491 (LWG) |
| *Glycosmis* *pentaphylla* (Retz.) DC. | Shrubs | Kushwaha 259900 (LWG) |
| *Hesperethusa* *crenulata* (Roxb.) M. Roem. | Tree | Panigrahi 13588 (BSA) |
| *Limonia* *acidissima* Groff | Tree | Kushwaha 254497 (LWG) |
| *Murraya* *koenigii* (L.) Spreng. | Tree | Kushwaha 259853 (LWG) |
| *Murraya* *paniculata* (L.) Jack | Tree | Kushwaha 254471 (LWG) |
| Salicaceae | *Casearia* *tomentosa* Roxb. | Tree | Kushwaha 254465 (LWG) |
| *Flacourtia* *indica* (Burm.f.) Merr. | Tree | Kushwaha 259830 (LWG) |
| Sapindaceae | *Sapindus* *emarginatus* Vahl | Tree | Maheshwari & Saha EBH 821 (LWG) |
| *Schleichera* *oleosa* (Lour.) Merr. | Tree | Kushwaha 259823 (LWG) |
| Sapotaceae | *Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr. | Tree | Kushwaha 254360 (LWG) |
| Scrophulariaceae | *Bacopa* *monnieri* (L.) Wettst. | Herb | Kushwaha 254472 (LWG) |
| *Centranthera* *nepalensis* D.Don | Herb | Kushwaha 254466 (LWG) |
| *Kickxia* *ramosissima* (Wall.) Janch. | Herb | Panigrahi 13421 (BSA) |
| *Limnophila* *heterophylla* (Roxb.) Benth. | Herb | Panigrahi 9668 (BSA) |
| *Limnophila* *indica* (L.) Druce | Herb | Panigrahi 12354 (BSA) |
| *Mazus* *pumilus* (Burm.f.) Steenis | Herb | Panigrahi 12094 (BSA) |
| *Mecardonia* *procumbens* (Mill.) Small | Herb | Kushwaha 254399 (LWG) |
| *Scoparia* *dulcis* L. | Herb | Panigrahi 9684 (BSA) |
| *Veronica* *anagallis* L. | Herb | Panigrahi 12635 (BSA) |
| Simaroubaceae | *Ailanthus* *excelsa* Roxb. | Tree | Kushwaha 259854 (LWG) |
| Solanaceae | *Datura innoxia*Mill. | Herb | Kushwaha 254473 (LWG) |
| *Datura metel*L. | Shrub | Kushwaha 259284 (LWG) |
| *Lycopersicon* *lycopersicum* (L.) H.Karst. | Shrub | Kushwaha 254480 (LWG) |
| *Nicotiana* *plumbaginifolia* Viv. | Herb | Kushwaha 254476 (LWG) |
| *Nicotiana* *tabacum* L. | Herb | Kushwaha 259854 (LWG) |
| *Physalis minima L.* | Herb | Kushwaha 254337 (LWG) |
| *Physalis peruviana L.* | Herb | Kushwaha 254477 (LWG) |
| *Solanum americanum* Mill. | Herb | Kushwaha 254481 (LWG) |
| *Solanum incanum L.* | Herb | Kushwaha 254484 (LWG) |
| *Solanum lycopersicum*L. | Shrub | Kushwaha 254479 (LWG) |
| *Solanum melongena*L. | Herb | Kushwaha 254482 (LWG) |
| *Solanum nigrum L.* | Herb | Kushwaha 254489 (LWG) |
| *Solanum* *surattense* Burm. f. | Herb | Kushwaha 259254 (LWG) |
| *Solanum* *viarum* Dunal | Herb | Kushwaha 254478 (LWG) |
| *Solanum* *virginianum* L. | Herb | Kushwaha 304183 (LWG) |
| *Solanum tuberosum L.* | Herb | Kushwaha 304186 (LWG) |
| Sterculiaceae | *Byttneria* *herbacea* Roxb. | Herb | Panigrahi 12517 (BSA) |
| *Eriolaena* *hookeriana* Wight & Arn. | Tree | Mishra 9882 (BSA) |
| *Firmiana* *simplex* (L.) W.Wight | Tree | Panigrahi 12027 (BSA) |
| *Helicteres* *isora* L. | Shrub | Kushwaha 304184 (LWG) |
| *Melochia* *corchorifolia* L. | Herb | Kushwaha 254483 (LWG) |
| *Sterculia* *villosa* Roxb. | Tree | Kushwaha 259857 (LWG) |
| *Waltheria* *indica* L. | Herb | Kushwaha 259248 (LWG) |
| Ulmaceae | *Holoptelea* *integrifolia* ( Roxb. ) Planch. | Tree | Kushwaha 259856 (LWG) |
| *Parasponica rugosa* Blume | Tree | Kushwaha 259865 (LWG) |
| Verbenaceae | *Clerodendrum* *phlomidis* L.f. | Shrub | Kushwaha 304185 (LWG) |
| *Lantana* *camara* L. | Shrub | Kushwaha 254423 (LWG) |
| *Lippia javanica (Burm.f.) Spreng.* | Shrub | Kushwaha 304187 (LWG) |
| *Phyla* *nodiflora* (L.) Greene | Shrub | Mishra 9750 (BSA) |
| *\*Tectona grandis* L. | Tree | Kushwaha 304182 (LWG) |
| Violaceae | *Hybanthus* *enneaspermus* (L.) F.Muell. | Herb | Mishra 9913 (BSA) |
| *Hybanthus* *linearifolius* (Vahl) Urb. | Herb | Srivastava 21664 (LWG) |
| Vitaceae | *Ampelopsis* *glandulosa* (Wall.) Momiy. | Climber | Kushwaha 259218 (LWG) |
| *Cayratia* *trifolia* (L.) Domin | Climber | Panigrahi 11167 (BSA) |
| *Leea* *asiatica* (L.) Ridsdale | Shrub | Kushwaha 304185 (LWG) |
|  | **MONOCOT** |  |  |
| Alismataceae | *Sagittaria* *sagittifolia* L. | Herb | Kushwaha 254615 (LWG) |
| Amaryllidaceae | *Crinum asiaticum* L. | Herb | Kushwaha 304103 (LWG) |
| Aponogetonaceae | *Aponogeton* *crispus* Thunb. | Herb | Kushwaha 304115 (LWG) |
| *Aponogeton* *natans* (L.) Engl. & K.Krause | Herb | Panigrahi 3677 (BSA) |
| Araceae | *Alocasia macrorrhizos* (L.) G. Don | Herb | Kushwaha 304117 (LWG) |
| *Amorphophallus paeoniifolius* (Dennst.) Nicolson | Herb | Kushwaha 304107 (LWG) |
| *\*Colocasia* *esculenta* (L.) Schott | Herb | Kushwaha 304120 (LWG) |
| *Pistia stratiotes* L. | Herb | Kushwaha 304124 (LWG) |
| *Remusatia* *vivipara* (Roxb.) Schott | Herb | Kushwaha 254453(LWG) |
| Arecaceae | *Phoenix acaulis* Roxb. | Shrub | Kushwaha 304116 (LWG) |
| *Phoenix rupicola* T.Anderson | Tree | Kushwaha 304121 (LWG) |
| Asparagaceae | *Asparagus racemosus* Willd. | Shrub | Kushwaha 304125 (LWG) |
| Colchicaceae | *Gloriosa* *superba* L. | Shrub | Kushwaha 254333 (LWG) |
| Commelinaceae | *Commelina* *benghalensis* L. | Herb | Kushwaha 304126 (LWG) |
| *Commelina* *caroliniana* Walter | Herb | Panigrahi 13763 (BSA) |
| *Commelina* *diffusa* Burm.f. | Herb | Panigrahi 9671 (BSA) |
| *Commelina* *paludosa* Blume | Herb | Panigrahi 12582 (BSA) |
| *Cyanotis* *axillaris* (L.) D.Don ex Sweet | Herb | Kushwaha 304128 (LWG) |
| *Murdannia* *malabarica* (L.) G.Brückn. | Herb | Panigrahi 13752 (BSA) |
| *Murdannia* *nudiflora* (L.) Brenan | Herb | Kushwaha 304130 (LWG) |
| Cyperaceae | *Courtoisina* *cyperoides* (Roxb.) Soják | Grass | Panigrahi 13463 (BSA) |
| *Cyperus* *compactus* Retz. | Grass | Panigrahi 3690 (BSA) |
| *Cyperus* *compressus* L. | Grass | Mishra 9863 (BSA) |
| *Cyperus* *cyperoides* (L.) Kuntze | Grass | Panigrahi 12594 (BSA) |
| *Cyperus* *difformis* L. | Grass | Mishra 9868 (BSA) |
| *Cyperus* *exaltatus* Retz. | Grass | Panigrahi 13494 (BSA) |
| *Cyperus* *iria* L. | Grass | Kushwaha 254380 (LWG) |
| *Cyperus* *glomeratus* L. | Grass | Kushwaha 254654 (LWG) |
| *Cyperus* *leucocephalus* Retz. | Grass | Mishra 9944 (BSA) |
| *Cyperus* *malaccensis* Lam. | Grass | Kushwaha 254635 (LWG) |
| *Cyperus* *michelianus* subsp. *pygmaeus* (Rottb.) Asch. & Graebn. | Grass | Panigrahi 12560 (BSA) |
| *Cyperus* *niveus* Retz. | Grass | Mishra 9908 (BSA) |
| *Cyperus* *pangorei* Rottb. | Grass | Kushwaha 254350 (LWG) |
| *Cyperus* *rotundus* L. | Grass | Kushwaha 254667 (LWG) |
| *Cyperus* *tenuispica* Steud. | Grass | Panigrahi 13904 (BSA) |
| *Eleocharis* *geniculata* (L.) Roem. & Schult. | Grass | Kushwaha 254642 (LWG) |
| *Eleocharis* *palustris* (L.) Roem. & Schult | Grass | Panigrahi 3681 (BSA) |
| *Eleocharis* *quinqueflora* (Hartmann) O.Schwarz | Grass | Kushwaha 254627 (LWG) |
| *Fimbristylis bisumbellata*(Forssk.) Bubani | Grass | Kushwaha 254485 (LWG) |
| *Fimbristylis* *dichotoma* (L.) Vahl | Grass | Mishra 9761 (BSA) |
| *Fimbristylis* *falcata* (Vahl) Kunth | Grass | Mishra 9992 (BSA) |
| *Fimbristylis* *miliacea* (L.) Vahl | Grass | Mishra 9811 (BSA) |
| *Fimbristylis* *squarrosa* Vahl | Grass | Mishra 9813 (BSA) |
| *Fimbristylis* *tetragona* R.Br. | Grass | Panigrahi 13832 (BSA) |
| *Fuirena* *ciliaris* (L.) Roxb. | Grass | Panigrahi 13711 (BSA) |
| *Kyllinga* *brevifolia* Rottb. | Grass | Kushwaha 264777 (LWG) |
| *Pycreus* *flavidus* (Retz.) T.Koyama | Grass | Mishra 9818 (BSA) |
| *Pycreus* *polystachyos* (Rottb.) P.Beauv. | Grass | Mishra 9874 (BSA) |
| *Pycreus* *pumilus* (L.) Nees | Grass | Mishra 9908 (BSA) |
| *Schoenoplectiella* *articulata* (L.) Lye | Grass | Kushwaha 254614 (LWG) |
| *Schoenoplectiella* *juncoides* (Roxb.) Lye | Grass | Mishra 9823 (BSA) |
| *Scirpus* *supinus* L. | Grass | Panigrahi 13668 (BSA) |
| *Scleria* *levis* Retz. | Grass | Panigrahi & Prasad 2035 (BSA) |
| Eriocaulaceae | *Eriocaulon guinguangulare* Linn | Herb | Panigrahi 2638 (BSA) |
| Hydrocharitaceae | *Blyxa* *aubertii* Rich. | Herb | Kushwaha 254486 (LWG) |
| *Hydrilla* *verticillata* (L.f.) Royle | Herb | Kushwaha 304132 (LWG) |
| *Najas* *minor* All. | Herb | Panigrahi 2636 (BSA) |
| *Vallisneria* *spiralis* L. | Herb | Kushwaha 304185 (LWG) |
| Lemnaceae | *Lemna* *aequinoctialis* Welw. | Herb | Kushwaha 304129 (LWG) |
| *Wolffia* *microscopica* (Griff.) Kurz | Herb | Kushwaha 304133 (LWG) |
| Musaceae | *\*Musa balbisiana* Colla | Large Shrub | Kushwaha 304135 (LWG) |
| Orchidaceae | *Vanda* *tessellata* (Roxb.) Hook. ex G.Don | Herb | Kushwaha 304136 (LWG) |
| *Zeuxine* *strateumatica* (L.) Schltr. | Herb | Kushwaha 304138 (LWG) |
| Poaceae | *Alloteropsis* *cimicina* (L.) Stapf | Grass | Panigrahi 13856 (BSA) |
| *Andropogon* *fastigiatus* Sw. | Grass | Panigrahi 13807 (BSA) |
| *Apluda* *mutica* L. | Grass | Kushwaha 264766 (LWG) |
| *Apocopis* *vaginata* Hack. | Grass | Mishra 9909 (BSA) |
| *Arundo* *donax* L. | Shrubs | Kushwaha 254772 (LWG) |
| *Aristida* *adscensionis* L. | Grass | Panigrahi 12464 (BSA) |
| *Aristida* *funiculata* Trin. & Rupr. | Grass | Panigrahi & Prasad 2048 (BSA) |
| *Aristida* *redacta* Stapf | Grass | Panigrahi 9693 (BSA) |
| *Aristida* *setacea* Retz. | Grass | Panigrahi 3614 (BSA) |
| *Arthraxon* *hispidus* (Thunb.) Makino | Grass | Kushwaha 264727 (LWG) |
| *Arthraxon* *lancifolius* (Trin.) Hochst. | Grass | Panigrahi 8494 (BSA) |
| *Arthraxon* *prionodes* (Steud.) Dandy | Grass | Panigrahi 11125 (BSA) |
| *Avena* *sativa* L. | Grass | Kushwaha 254611 (LWG) |
| *Arundinella* *setosa* Trin. | Grass | Panigrahi 3513 (BSA) |
| *Bothriochloa* *pertusa* (L.) A.Camus | Grass | Mishra 9869 (BSA) |
| *Bambusa* *bambos* (L.) Voss | Shrub | Kushwaha 254283 (LWG) |
| *Chloris* *virgata* Sw. | Grass | Kushwaha 254503 (LWG) |
| *Chrysopogon* *fulvus* (Spreng.) Chiov. | Grass | Kushwaha 254526 (LWG) |
| *Coix* *aquatica* Roxb. | Grass | Kushwaha 254490 (LWG) |
| *Cymbopogon* *martini* (Roxb.) W.Watson | Grass | Panigrahi 8499 (BSA) |
| *Cynodon* *dactylon* (L.) Pers. | Grass | Kushwaha 254607 (LWG) |
| *Dactyloctenium* *aegyptium* (L.) Willd. | Grass | Kushwaha 254665 (LWG) |
| *Dendrocalamus* *strictus* (Roxb.) Nees | Grass | Panigrari & Prasad 2037 (BSA) |
| *Desmostachya* *bipinnata* (L.) Stapf | Grass | Kushwaha 254625 (LWG) |
| *Dichanthium* *annulatum* (Forssk.) Stapf | Grass | Kushwaha 254454 (LWG) |
| *Digitaria* *bicornis* (Lam.) Roem. & Schult. | Grass | Panigrahi 20590 (BSA) |
| *Digitaria* *ciliaris* (Retz.) Koeler | Grass | Kushwaha 254490 (LWG) |
| *Digitaria* *longiflora* (Retz.) Pers. | Grass | Mishra 9774 (BSA) |
| *Digitaria* *stricta* Roth | Grass | Panigrahi 9665 (BSA) |
| *Dimeria* *ornithopoda* Trin. | Grass | Panigrahi 12330 (BSA) |
| *Echinochloa* *colona* (L.) Link | Grass | Panigrahi 12063 (BSA) |
| *Echinochloa* *crus-galli* (L.) P.Beauv. | Grass | Mishra 9779 (BSA) |
| *Echinochloa* *stagnina* (Retz.) P.Beauv. | Grass | Mishra 9947 (BSA) |
| *Eleusine* *indica* (L.) Gaertn. | Grass | Kushwaha 254601 (LWG) |
| *Enteropogon* *dolichostachyus* (Lag.) Keng | Grass | Kushwaha 254522 (LWG) |
| *Eragrostis* *amabilis* (L.) Wight & Arn. | Grass | Kushwaha 254623 (LWG) |
| *Eragrostis* *japonica* (Thunb.) Trin. | Grass | Kushwaha 254459 (LWG) |
| *Eragrostis* *pilosa* (L.) P.Beauv. | Grass | Kushwaha 264728 (LWG) |
| *Eragrostis tremula* Hochst. ex Steud. | Grass | Kushwaha 264796 (LWG) |
| *Eragrostis* *unioloides* (Retz.) Nees ex Steud. | Grass | Kushwaha 264730 (LWG) |
| *Eremopogon* *foveolatus* (Delile) Stapf | Grass | Panigrahi 12299 (BSA) |
| *Eulalia* *trispicata* (Schult.) Henrard | Grass | Panigrahi 4122 (BSA) |
| *Eulaliopsis* *binata* (Retz.) C.E.Hubb. | Grass | Panigrahi 12371 (BSA) |
| *Hackelochloa* *granularis* (L.) Kuntze | Grass | Panigrahi 13743 (BSA) |
| *Hemarthria* *compressa* (L.f.) R.Br. | Grass | Panigrahi 12420 (BSA) |
| *Heteropogon* *contortus* (L.) P.Beauv. ex Roem. & Schult. | Grass | Kushwaha 264742 (LWG) |
| *\*Hordeum* *vulgare* L. | Grass | Kushwaha 304110 (LWG) |
| *Hygroryza* *aristata* (Retz.) Nees ex Wight & Arn. | Grass | Kushwaha 254492 (LWG) |
| *Imperata* *cylindrica* (L.) Raeusch. | Grass | Panigrahi 12407 (BSA) |
| *Isachne* *globosa* (Thunb.) Kuntze | Grass | Panigrahi 8467 (BSA) |
| *Ischaemum* *rugosum* Salisb. | Grass | Panigrahi 4060 (BSA) |
| *Iseilema* *laxum* Hack. | Grass | Mishra 9726 (BSA) |
| *Leptochloa* *chinensis* (L.) Nees | Grass | Panigrahi 4121 (BSA) |
| *Leptochloa* *panicea* (Retz.) Ohwi | Grass | Kushwaha 254488 (LWG) |
| *Melanocenchris* *jacquemontii* Jaub. & Spach | Grass | Panigrahi & Prasad 3041 (BSA) |
| *Ophiuros* *exaltatus* (L.) Kuntze | Grass | Kushwaha 254309 (LWG) |
| *Oplismenus* *hirtellus* (L.) P.Beauv. | Grass | Kushwaha 254221 (LWG) |
| *Oryza* *glaberrima* Steud. | Grass | Panigrahi 12030 (BSA) |
| *\*Oryza* *rufipogon* Griff. | Grass | Panigrahi 13402 (BSA) |
| *\*Oryza* *sativa* L. | Grass | Kushwaha 304112 (LWG) |
| *Panicum* *notatum* Retz. | Grass | Panigrahi 13641 (BSA) |
| *Panicum* *paludosum* Roxb. | Grass | Panigrahi 12062 (BSA) |
| *Paspalidium* *flavidum* (Retz.) A.Camus | Grass | Panigrahi 12229 (BSA) |
| *Paspalum* *scrobiculatum* L. | Grass | Mishra 9770 (BSA) |
| *Pennisetum* *glaucum* (L.) R.Br. | Grass | Panigrahi 12477 (BSA) |
| *Pennisetum* *pedicellatum* Trin. | Grass | Kushwaha 254513 (LWG) |
| *Perotis* *indica* (L.) Kuntze | Grass | Mishra 9867 (BSA) |
| *Phalaris* *minor* Retz. | Grass | Kushwaha 254631 (LWG) |
| *Pogonatherum* *paniceum* (Lam.) Hack. | Grass | Panigrahi 4061 (BSA) |
| *Polypogon* *monspeliensis* (L.) Desf. | Grass | Kushwaha 254606 (LWG) |
| *Pseudoraphis* *spinescens* (R.Br.) Vickery | Grass | Panigrahi 2027 (BSA) |
| *Pseudosorghum* *fasciculare* (Roxb.) A.Camus | Grass | Panigrahi 13775 (BSA) |
| *Saccharum* *bengalense* Retz. | Grass | Panigrahi 13475 (BSA) |
| *Saccharum* *spontaneum* L. | Grass | Panigrahi 12659 (BSA) |
| *Sacciolepis* *interrupta* (Willd.) Stapf | Grass | Panigrahi 13616 (BSA) |
| *Sacciolepis* *myosuroides* (R.Br.) A.Camus | Grass | Panigrahi & Prasad 2918 (BSA) |
| *Schizachyrium* *brevifolium* (Sw.) Buse | Grass | Panigrahi & Prasad 2520 (BSA) |
| *Schizachyrium* *exile* (Hochst.) Pilg. | Grass | Panigrahi 13606 (BSA) |
| *Schoenefeldia* *gracilis* Kunth | Grass | Panigrahi 9625 (BSA) |
| *Sehima* *nervosum* (Rottler) Stapf | Grass | Panigrahi & Prasad 2071 (BSA) |
| *Setaria* *intermedia* Roem. & Schult. | Grass | Panigrahi 12552 (BSA) |
| *Setaria* *pumila* (Poir.) Roem. & Schult. | Grass | Kushwaha 264788 (LWG) |
| *Setaria* *verticillata* (L.) P.Beauv. | Grass | Panigrahi 13886 (BSA) |
| *\*Sorghum* *bicolor* (L.) Moench | Shrub | Kushwaha 254453 (LWG) |
| *Themeda* *quadrivalvis* (L.) Kuntze | Grass | Kushwaha 254514 (LWG) |
| *Thysanolaena* *latifolia* (Roxb. ex Hornem.) Honda | Grass | Panigrahi 12664 (BSA) |
| *Tragus* *racemosus* (L.) All. | Grass | Panigrahi & Prasad 3674 (BSA) |
| *\*Triticum* *aestivum* L. | Grass | Kushwaha 304113 (LWG) |
| *Urochloa* *panicoides* P.Beauv. | Grass | Singh & Saha EBH 506 (LWG) |
| Pontederiaceae | *Eichhornia* *crassipes* (Mart.) Solms | Herb | Kushwaha 254400 (LWG) |
| *Monochoria* *vaginalis* (Burm.f.) C.Presl | Herb | Kushwaha 304141 (LWG) |
| Potamogetonaceae | *Potamogeton* *crispus* L. | Herb | Kushwaha 304185 (LWG) |
| *Potamogeton* *nodosus* Poir. | Herb | Panigrahi 13708 (BSA) |
| Smilacaceae | *Smilax* *guianensis* Vitman | Herb | Panigrahi 13675 (BSA) |
| Typhaceae | *Typha* *domingensis* Pers. | Herb | Kushwaha 254641 (LWG) |
| *Typha* *elephantina* Roxb. | Herb | Panigrahi 12086 (BSA) |
| Xanthorrhoeaceae | *Asphodelus* *tenuifolius* Cav. | Herb | Panigrahi 12655 (BSA) |
| Zingiberaceae | *Cheilocostus speciosus* (J. Koenig.) C. D. Specht | Herb | Kushwaha 304134 (LWG) |
| *\*Curcuma aromatica* Salisb. | Herb | Kushwaha 304143 (LWG) |
| *\*Curcuma longa* L. | Herb | Kushwaha 304105 (LWG) |
| *Zingiber* *officinale* Roscoe | Herb | Kushwaha 254282 (LWG) |



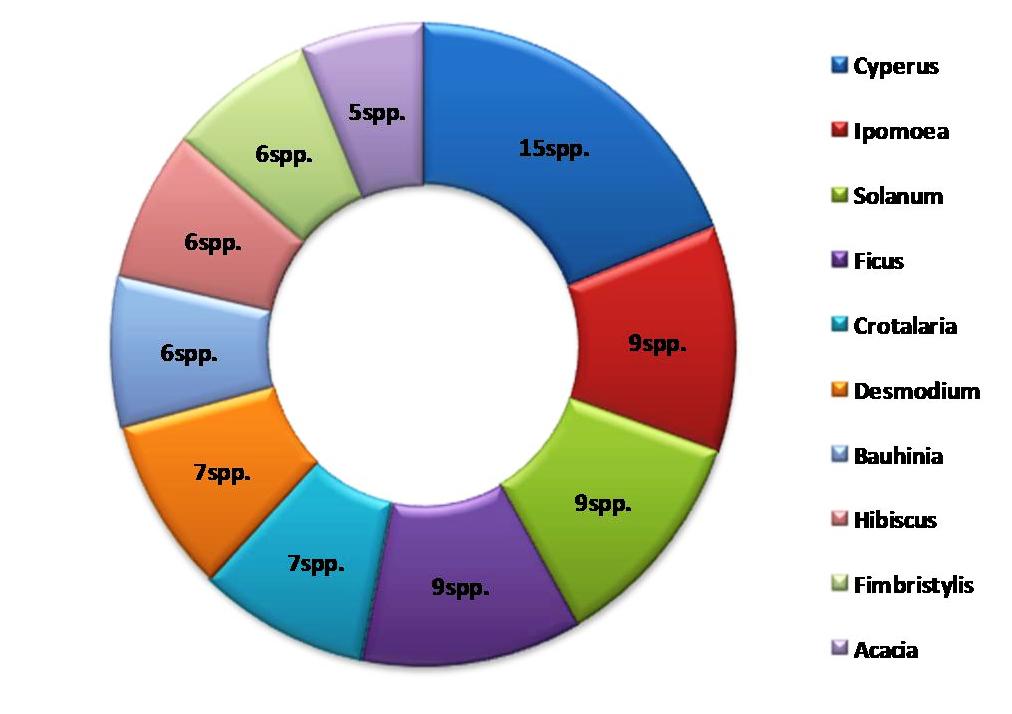
**Figure 1.**



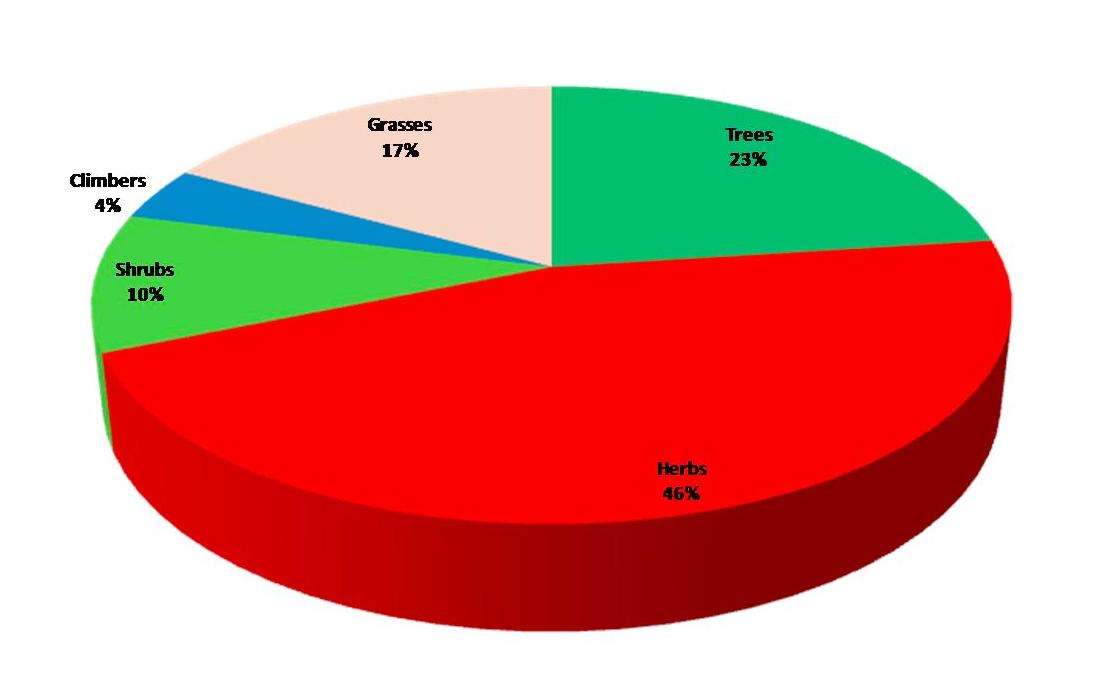
**Figure 2.**



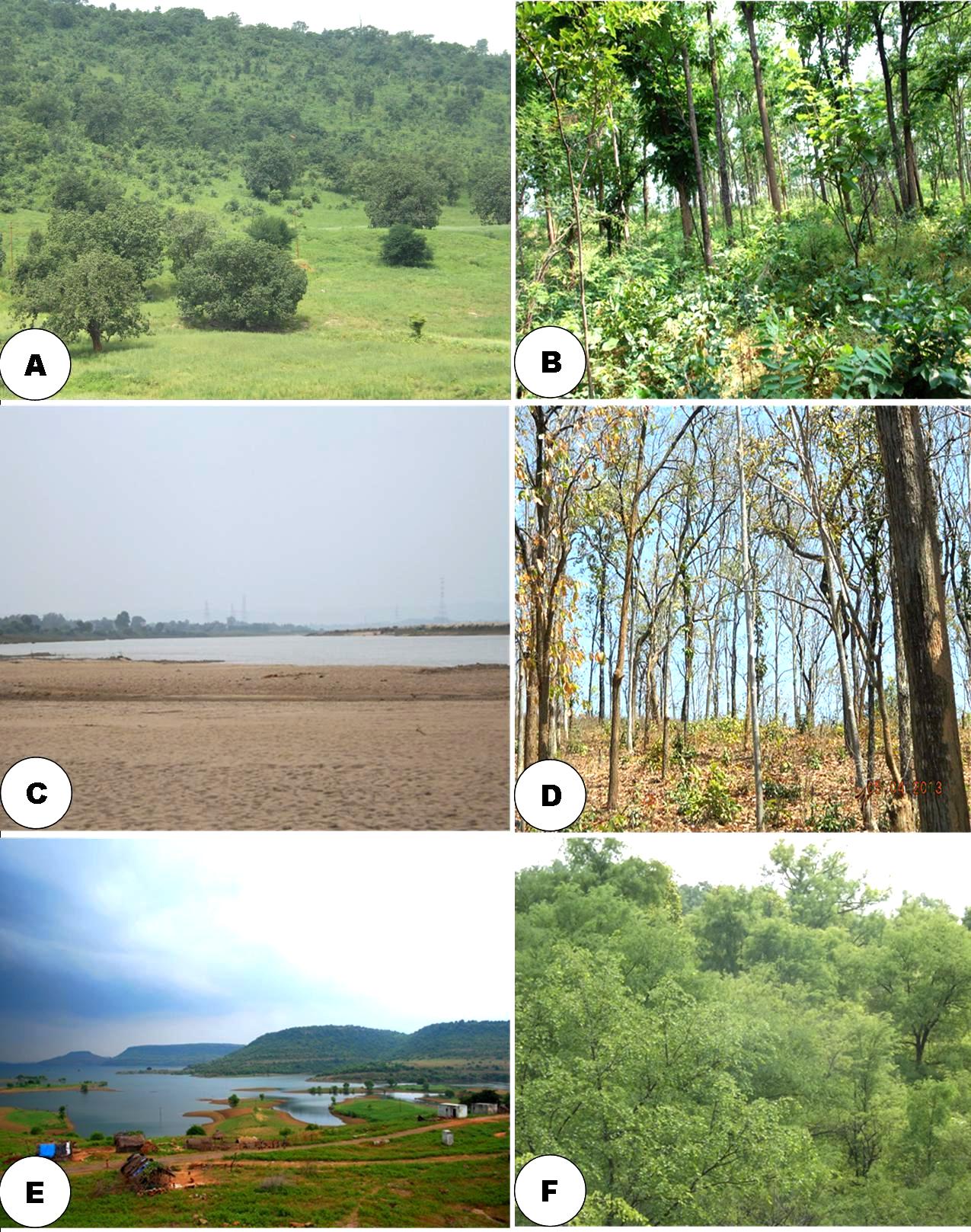
**Figure 3**



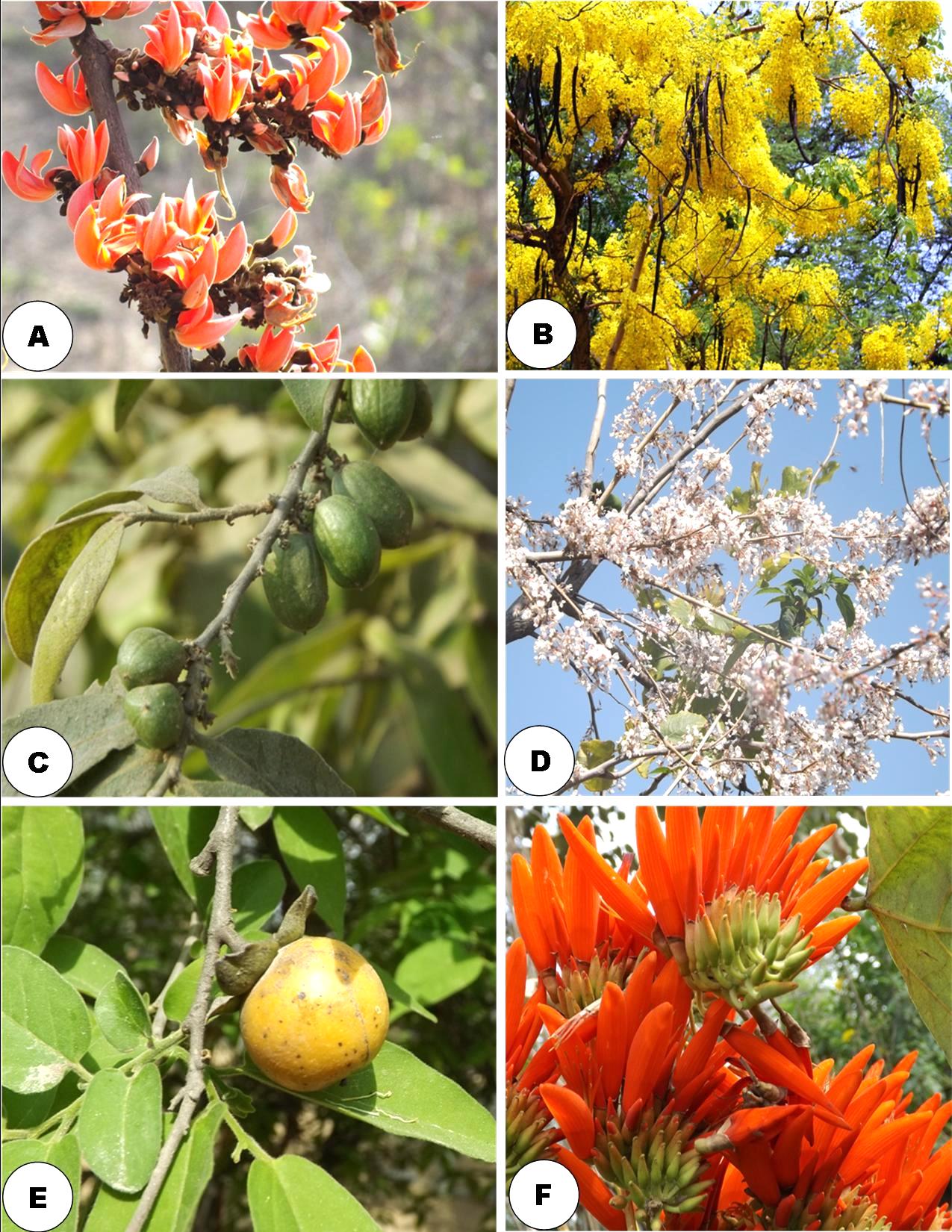
**Figure 4.**



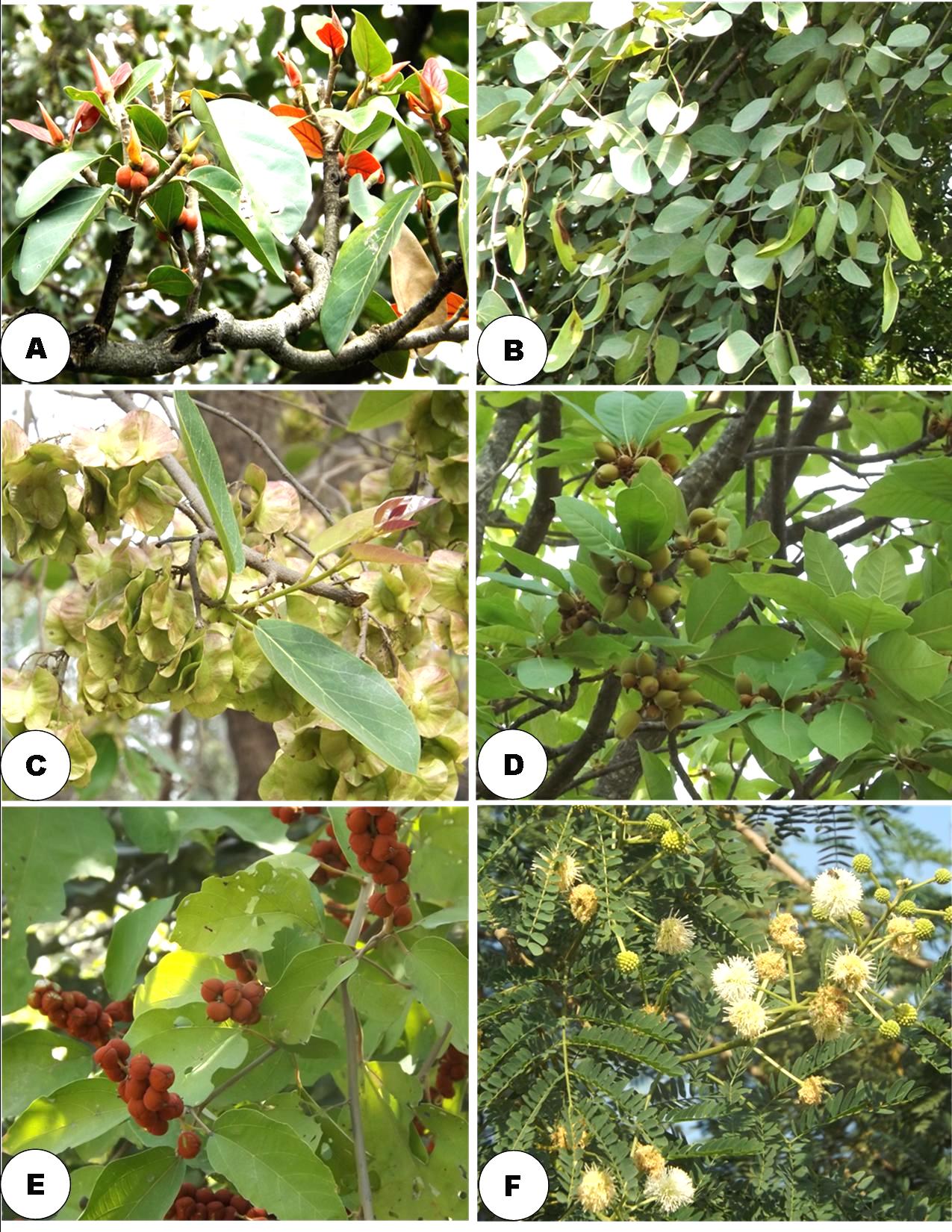
**Figure 5.**



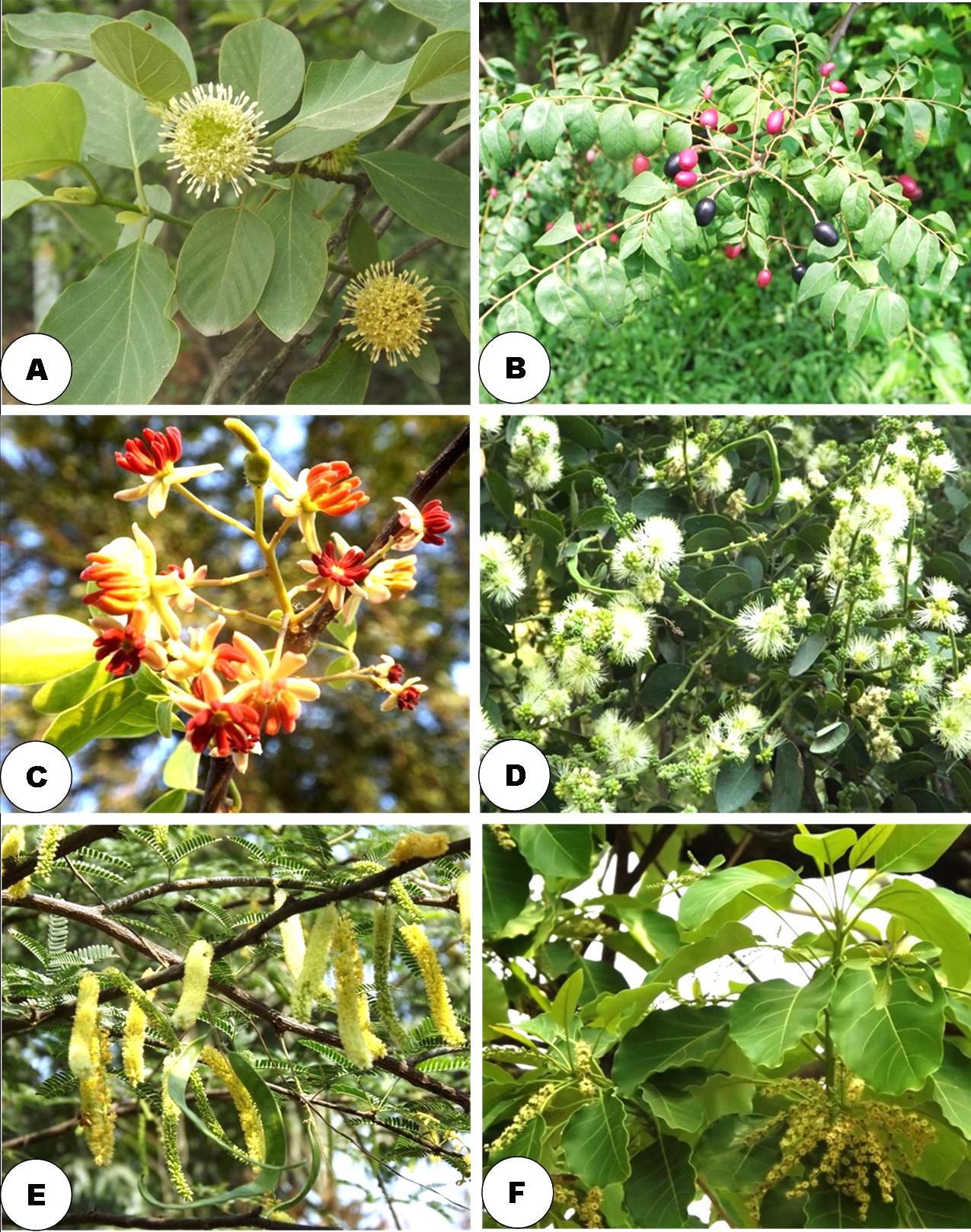
**Image 1.**

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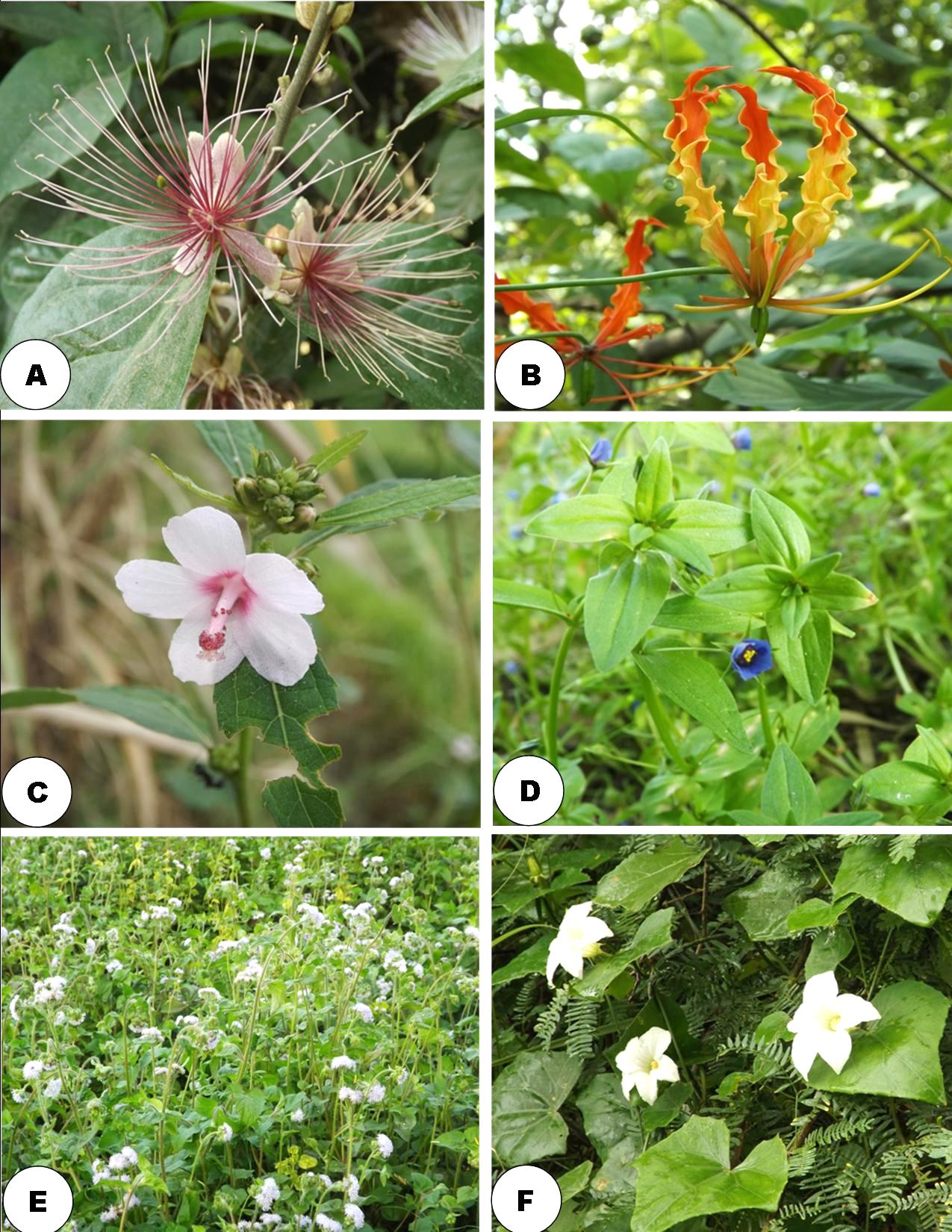
**Image 2.**

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**Image 3.**

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**Image 4.**

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**Image 5.**

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**Image 6.**

**Captions**

**Table 1:** List of species

**Figure 1:** Study site; Sonbhadra District Uttar Pradesh. Source: Uttar Pradesh map from: https://commons.wikimedia.org/wiki/File:Uttar\_Pradesh\_locator\_map.svg and Sonbhadra map from: https://www.google.co.in/maps/place/Sonbhadra,+Uttar+Pradesh

**Figure 2:** Analysis of Dicot and Monocot taxa

**Figure 3:** Largest families

**Figure 4:** Largest genera

**Figure 5:** Species in diffent life forms

**Image 1:** General views of the forest (Photo credit: A. K. Kushwaha)

**Image 2:** A: *Butea* *monosperma* (Lam.) Taub.; B: Cassia fistula L.; C: *Casearia* *tomentosa* Roxb.; D: *Desmodium oojenenensis* (Roxb.) H. Ohasi; E: *Diospyros Montana* Roxb.; F: *Erythrina* *stricta* Roxb. (Photo credit: A. K. Kushwaha)

**Image 3:** A**:** *Ficus benghalensis* L.; B: *Hardwickia binata* Roxb.; C: *Holoptelea* *integrifolia* ( Roxb.)Planch.; D: *Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr.; E: *Mallotus philippensis* (Lam.) Müll.Arg.; F: *Leucaena leucocephala* (Lam.) de Wit (Photo credit: A. K. Kushwaha)

**Image 4:** A: *Mitragyna parvifolia* (Roxb.) Korth.; B: *Murraya koenigii* (L.) Spreng; C: *Limonia* *acidissima* Groff; D: Pithecellobium dulce (Roxb.) Benth.;E: *Prosopis* *juliflora* (Sw.) DC.; F: *Terminalia bellirica* (Gaertn.) Roxb. (Photo credit: A. K. Kushwaha)

**Image 5:** A: *Capparis zeylanica* L.; B: *Gloriosa superb* L.; C: *Urena lobata* L.; D: *Anagallis arvensis* L.; E: *Ageratum conyzoides* (L.) L.; F: *Coccinia grandis* (L.) Voigt (Photo credit: A. K. Kushwaha)

**Image 6**: A: *Solanum incanum* L.; B: *Arundo donax* L.; C: Desmostachya bipinnata (L.) Stapf; D: *Eleusine indica* (L.) Gaertn; E: *Kyllinga* *brevifolia* Rottb.; F: *Polypogon monspeliensis* (L.) Desf. (Photo credit: A. K. Kushwaha)