

FLORISTIC COMPOSITION OF KADIGARH NATIONAL PARK UNDER MYMENSINGH DISTRICT, BANGLADESH

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Abstract

This study presents elementary taxonomic data on the floristic composition of the Kadigarh National Park (KgNP). The study found that, the forest is represented by 271 species under 189 genera and 78 families. Among them 53 species belong to Monocotyledons (Liliopsida), 208 species belong to Dicotyledons (Magnoliopsida), 9 species belong to Pteridophytes and 1 species belong to Gymnosperm. The study also found that, about 43% of these species are herbs, 18% shrubs, 31% trees, and 7% climbers. The study reveals that, Fabaceae is the largest family with 20 species, followed by Rubiaceae with 17 species, Poaceae with 16 species, Euphorbiaceae with 15 species, and Cyperaceae with 13 species. On the other hand, *Cyperus* appeared as the largest genus with 6 species followed by *Ficus* and *Lindernia* with 5 species each and *Desmodium* with 4 species. The data analysis has shown that 246 plant species (over 90% of the total flora) have either known economical or ecological values. The findings of the study can be used as baseline data to take any forest management plan for the flora of this park.

Introduction

The *Sal* forests of Bangladesh is a part of the tropical moist deciduous forest. These type of forests are scattered in the central and northern parts of the country, and the greater part lies in Dhaka, Rangpur, Mymensingh, Tangail, Dinajpur and Rajshahi districts (Ghani 1998). Though it covers only 120000 hectares, 25% of the total forest areas and 0.81% of country's total land area (BFD 2019), but plays an important role in biodiversity conservation. Therefore, government has declared most of the forests as national park (*viz.* Madhupur National Park, Bhawal National Park, Birganj National Park, Altadighi National Park, Singra National Park and Kadigarh National Park etc) to protect the biodiversity of these natural forests.

Kadigarh National Park (KgNP) is a part of greater Madhupur tract, a large upland area in the central part of Bangladesh. It is located under Kachina union of Bhaluka Upazila under Mymensingh district. It is about 32 km South of Mymensingh district and 10 km West of Dhaka-Mymensingh highway. Geographically, KgNP lies between 24°20'18"- 24°35'19"N and 90°19'42"- 90°34'11" E (Fig. 1). Before independence, there was a famous wood merchant named *Kadir Mian*, used to buy wood and trees of this forest and then this forest was named after the name of *Kadir Meyer* Jungle, which is now known as Kadigarh. Kadigarh is a beat under Bhaluka Range of Mymensingh Forest Division. It was declared as National Park on 24 October 2010 by Bangladesh Government through Gazette Notification No. 512 under Bangladesh Wildlife (Preservation) Amendment Act, 1974. After the declaration of National Park, it has widened a new facet of developing eco-tourism, biodiversity conservation and development of education and research in this area. This is a mixed type of forest with an area of 850 acres (344.13 hectares). Topography of

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the area mainly consists of numerous *chala* (high and forested area) and *Bides* (low-land for cultivation) along with some aquatic habitat, roadside habitat and homestead habitat. The Solis of the area have developed largely on *Madhupur Clay*, highly weathered and deeply oxidized reddish brown deposit which are nutrient poor and somewhat acidic, red or brown in colour. Average temperature of the area varies from 17°C to 37°C, where January is the coolest and April is the hottest month. Average annual precipitation is 440 cm.

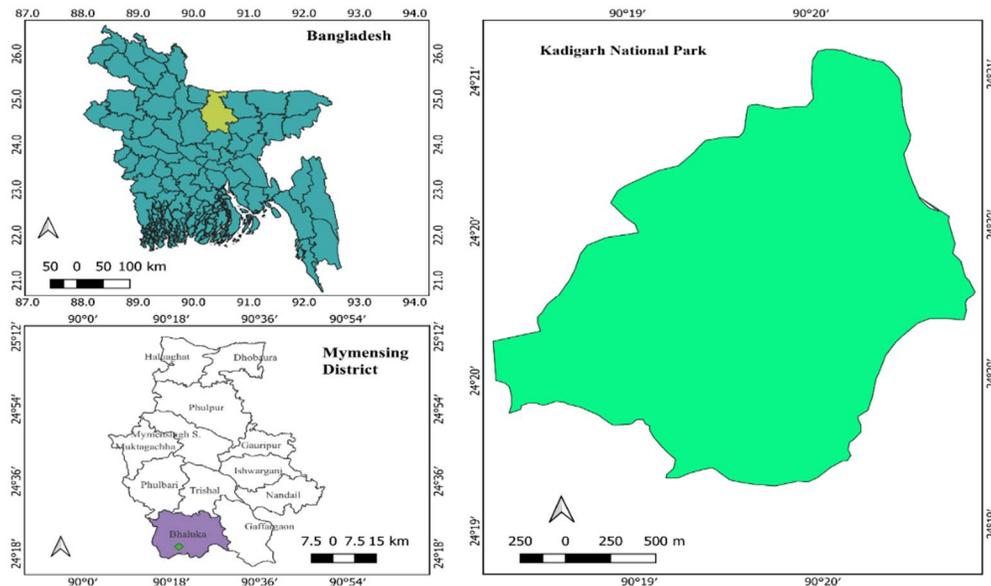


Fig. 1. Map of the study area.

The forest is dominated by *Sal* (*Shorea robusta* Gaertn.) and there is a very nice patches of *Sal* trees. Forests are mainly result of regeneration of coppice from old trees. The canopy height ranges from 15-20 m and canopy coverage is approximately 60%. The undergrowth of the forest is very poor and only few shrubs and herbs [*Desmodium gangeticum* DC., *Curcuma zedoaria* Roscoe, *Clerodendrum infortunatum* L., *Catunaregam spinosa* (Thunb.) Tirveng] are found here. Bangladesh Forest Department have been planted Bet (*Calamus tenuis* Roxb.), Jam (*Syzygium cumini* Skeels), Agar (*Aquilaria malaccensis* Lam.), Jarul (*Lagerstroemia speciosa* Pers.), Akashmoni (*Acacia auriculiformis* Benth.), Chapalish (*Artocarpus chama* Buch.-Ham.) etc. across different areas of the forest. Therefore, it is a beautiful combination of natural and manmade forests. Previous plantations of Minjiri (*Senna siamea* H.S.Irwin & Barneb), Arjun (*Terminalia arjuna* Wight & Arn.) and Teak (*Tectona grandis* L.f.) now look like mature forest. Recently, another plantation programme has been completed by Bangladesh Forest Department under SUFAL project.

Literature study revealed that, several attempts have been made on the floristic composition of *Sal* forest in Bangladesh viz. Choudhury *et al.*, 2004; Hasan and Bahauddin 2014; Islam *et al.*, 2014; Islam *et al.*, 2022; Mohd *et al.*, 2008; Rahman *et al.*, 2019; Rahman *et al.*, 2020; Tutul *et al.*, 2009 & 2010; Rahman and Vacik 2009; Uddin *et al.*, 2021. However, any taxonomic literature on the flora of the Kadigarh National Park was not known to be published so far. This park belongs to the category-IV of IUCN protected area management categories and threat percentages are 11

(Ahsan, 2016). Therefore, scientists of Bangladesh National Herbarium (BNH) has under taken a study programme of the park and conducted a number of floristic survey tour. The aims of present study is floristic inventory of vascular plant species of the park area as well as to know their use, local name and state of occurrence. This floristic inventory will generate baseline information for any conservation and management activity of the area. Some species are assessed as rare to this National Park which need to be brought under conservation management for environmental sustainability.

Materials and Methods

The work is based on fresh materials collected through six extensive field trips conducted in different seasons from 2019 to 2022. Surveys were done following walkover method to cover every *Chala* and *bide* including plantation areas, cultivated lands, roadsides and homestead areas. All indigenous and exotic species of vascular plants found in wild and as planted or cultivated have been collected with relevant information (*viz.* habit, habitat, local names, use/s etc.). Plant specimens have been collected in flowering/fruiting stage and photographs were taken. Identification of the specimens was confirmed by matching with the respective voucher specimens deposited at Bangladesh National Herbarium (DACB), consulting the taxonomic descriptions and keys available in the relevant literature (Ahmed *et al.*, 2008-2009; Ahmed *et al.*, 2009; Hooker 1872-1897; Prain 1903; Siddiqui *et al.*, 2007; Uddin and Hassan 2018; Wu *et al.*, 1999-2013). The relevant type images available in the web pages of different international herbaria and illustration of different Flora were also matched for correct identification. Plant taxonomic circumscription and authorities for each species were incorporated as per ICBN and checked in the recent taxonomic publications [*viz.* Wu and Raven, 1994-2001; Wu *et al.*, 1999-2013; The nomenclatural databases of IPNI 2008; TROPICOS 2010; The Plant List 2013]. The bangla name(s) of plant species have been collected mainly from local people interviewing them and also by consulting literatures *i.e.* Huq (2019), Siddiqui *et al.*, (2007); Ahmed *et al.*, (2008-2009); Ahmed *et al.*, (2009); Pasha and Uddin (2013). The economic uses of the species were recorded through interviews with the local people during the field surveys, and consulting the relevant literatures (*e.g.*, Ghani 1998; Uddin 2006; van Valkenburg and Bunyapraphatsara, 2002).

In the taxonomic enumeration presented in the paper, Pteridophytes have been placed first followed by Gymnosperm, Liliopsida and Magnoliopsida. The families of Pteridophyta and Gymnosperm have been arranged following the widely used classification systems of Kramer and Green (1990). Whereas, Liliopsida and Magnoliopsida have been arranged according to the classification system of Cronquist (1981). Species under each family & genus has been arranged alphabetically. Each taxon was furnished with valid name with original citation, basionym (if any), well-known synonym(s) (if any), bengoli name(s) (if any), use(s) (if any), habit form, habitat, state of occurrence and one representative specimen number collected from the study area. The status of plant species in the study area was inferred through field observation and classified into five categories. They are (i) Rare: species occurs in 1-4 localities; (ii) Occasional: species occurs in 5-24 localities; (iv) Common: species occurs in 25-100 localities; and (v) Very common: species occurs in more than 100 localities.

Results

The present floristic exploration has identified following vascular plant species from the Kadigarh National Park of Mymensing districts in Bangladesh.

PTERIDOPHYTE**LYGODIACEAE** M.Roem

Lygodium flexuosum (L.) Sw., J. Bot. (Schrader) 1800, (2): 106. 1801. *Ophioglossum flexuosum* L. BN: *Lata dhekia*. Climber, commonly occur in scrub jungle. Use: Medicinally used in jaundice, wound healing, rheumatism, scabies, ulcers and eczema. RS: KKI 4896 (DACB).

PTERIDACEAE E.D.M.Kirchn.

Adiantum philippense L., Sp. Pl. 2: 1094. 1753. *Adiantum lunulatum* Burm. f. BN: *Kali-jhant*. Herb, commonly occurs in shady forest areas. Use: Medicinally used in cough, leprosy, hair falling and also has ornamental value. RS: MAH 213 (DACB).

Ceratopteris pteridoides (Hook.) Hiern., Bot. Jahrb. 34, 561. 1905. BN: *Pani Dhekia*. Herb, occasionally occurs in marshy soil and bank of ponds. Use: Leaves are eaten as vegetables and also for making salads. RS: MAH 168 (DACB).

POLYPODIACEAE J.Presl & C.Presl

Microsorium punctatum (L.) Copel., Uni. Calif. Pub. Bot. 16: 111. 1929. BN: *Guchapatra fern*, *Hodda*. Epiphytic fern, occasionally occur on tree trunk. RS: KKI 4943 (DACB).

Pyrrhosia lanceolata (L.) Farwell, Amer. Midl. Naturalist. 12: 245. 1930. BN: *Atashirossi*. Epiphytic fern, occasionally occur on rocks or tree trunk. RS: KKI 4940 (DACB).

Drynaria quercifolia (L.) J. Sm., J. Bot. (Hook.) 3: 398. 1841. *Polypodium quercifolium* L. BN: *Pankhiraj*, *Pankha*, *Garur*. Epiphytic herb, occasionally grows on tree trunks. Use: Medicinally used in rheumatic pain management. RS: MAH 171 (DACB).

DENNSTAEDTIACEAE Pichi-Sermolli

Microlepia speluncae (L.) Moore, Ind. Fil.: 93. 1857. BN: *Jhir jhir dhekia*. Terrestrial fern, occasionally occurs in moist places. Use: Leaves are eaten as vegetables. RS: KKI 3801 (DACB).

ATHYRIACEAE Alston

Diplazium esculentum (Retz.) Sw., J. Bot. (Schrader) 1801(2): 312. 1803. *Hemionitis esculenta* Retz. BN: *Dheki shak*, *Babu shak*. Terrestrial fern, commonly occurs in hill slopes. Use: Medicinally used in diabetes, diarrhoea, rheumatism, dysentery and wounds; leaves are eaten as vegetables. RS: MAH 106 (DACB).

SINOPTERIDACEAE Koidz

Cheilosoria tenuifolia (Burm. f.) Trevis, Atti dell' Istit. Veneto 5(3): 579. 1877. BN: *Sada dhekia*. Fern, occasionally occurs in shady slopes. Use: Medicinally used as a hair tonic. RS: MAH 179 (DACB).

GYMNOSPERMS**CUPRESSACEAE** Bartling

Platycladus orientalis (L.) Franco, Portugaliae Act. Biol., Sér. B, Sist. Julio Henriques: 33. 1949. *Thuja orientalis* L. BN: *Thuja*. Shrub, planted. Fl. & fr.: April-October. Use: Plant is often used as a dense hedge and branches are used for making bouquets. RS: MAH 203 (DACB).

LILIOPSIDA (MONOCOTS)**ARECACEAE** C.H. Schultz-Schultzen.

Calamus tenuis Roxb., Fl. Ind. 3: 780. 1832. BN: *Jali bet*. Climbing shrub, commonly occurs in forest beds and thickets; planted also. Fl. & fr.: July-April. Use: Stem is used for making basket, mat, chair and furniture; fruits are edible. RS: KKI 3883 (DACB).

Calamus viminalis Willd., Sp. Pl. 2: 203. 1799. *Calamus litoralis* Blume. BN: *Bara bet*. Shrub, occasionally occurs in forest thickets; planted also. Fl. & fr.: Through the year. Use: Stem is used for making fence, walking sticks and furniture. RS: KKI 3884 (DACB).

ARACEAE A.Juss.

Colocasia esculenta (L.) Schott, Melet. Bot. 18. 1832. *Arum chinense* L. BN: *Mukhikachu*. Herb, commonly occurs in wet and marshy areas. Fl. & fr.: May-October. Use: Medicinally used in asthma and skin disorders; leaves and stems are eaten as vegetable. RS: MAH (DACB).

Scindapsus officinalis (Roxb.) Schott, Melet. Bot. 21. 1832. Epiphytic, large climber, usually attached to tree and rocks. Fl. & fr.: July-November. Use: Medicinally fruits are externally applied for rheumatism and in cuts and wounds. RS: KKI 3862 (DACB).

Typhonium trilobatum (L.) Schott, Wiener Z. Kunst 3: 72. 1829. BN: *Ghetkachu*. Herb, occasionally occurs in damp moist places. Fl. & fr.: April-October. Use: Leaves are eaten as vegetable. RS: MAH 167 (DACB).

COMMELINACEAE R.Br.

Commelina benghalensis L., Sp. Pl.: 41. 1753. BN: *Dholpata, Kanchira*. Herb, occasionally occurs in sandy loam on turfs, and moist clayey soils. Fl. & fr.: December-January. Use: Tender leaves and shoots are eaten as vegetables. RS: MAH 238 (DACB).

Commelina diffusa Burm.f., Fl. Indica 18. 1768. *Commelina agraria* Kunth. Herb, commonly occurs in forest beds. Fl. & fr.: December-January. Use: Young leaves are eaten as vegetables. RS: KKI 4953 (DACB).

Cyanotis cristata (L.) D.Don, Prod. Fl. Nep.: 46. 1825. BN: *Kansira*. Herb, rarely occurs in edges of ditches. Fl. & fr.: September-February. Use: Ornamental. RS: KKI 4956 (DACB).

Murdannia nudiflora (L.) Brenan, Kew Bull. 7: 189 1952. *Murdannia malabarica* (L.) G.Brückn. BN: *Kanduli, Kureli*. Herb, occasionally occurs in fallow lands. Fl. & fr.: April-December. RS: KKI 3825 (DACB).

ERIOCAULACEAE Martinov

Eriocaulon cinereum R.Br. Prodr. Fl. Nov. Holl. 254. 1810. BN: *Pani-guccha*. Herb, rarely occurs in shallow and wet areas. Fl. & fr.: October-January. RS: KKI 3863 (DACB).

CYPERACEAE A.Juss.

Cyperus difformis L. Cent. Pl. 2: 6. 1756. *Cyperus oryzetorum* Steud. BN: *Behuaghasi, Mati-heich, Choto heich*. Herb, commonly occurs in open fields. Fl. & fr.: August-December. Use: Occasionally used as fodder. RS: KKI 4949 (DACB).

Cyperus iria L., Sp. Pl. 45. 1753. Herb, occasionally occurs in rice field and fallow lands. Fl. & fr.: May-October. Use: Medicinally used in rheumatism and menstrual disorder. RS: MAH 192 (DACB).

Cyperus kyllingiella Larridon, Pl. Ecol. Evol. 144: 351. 2011. *Kyllinga microcephala* Steud. BN: *Gothubi, Nirbishi, Nir bisha ghas*. Herb, commonly occurs in shady, moist places, roadsides, and grassy fields. Fl. & fr.: July-November. Use: Plant is used as fodder. RS: KKI 4928 (DACB).

Cyperus michelianus (L.) Delile, Descr. Egypte, Hist. Nat. 3: 50. 1813. *Cyperus michelianus* (L.) Link. BN: *Nakphuli ghashi*, *Guccho mutha*. Herb, commonly occurs along water margins, and paddy fields. Fl. & fr.: June-September. Use: Plant is used as fodder. RS: KKI 4928 (DACB).

Cyperus squarrosus L., Cent. Pl. 2: 6. 1756. Herb, occasionally occurs in open, wet and grassy areas. Fl. & fr.: June-October. Use: Plant is used as fodder. RS: KKI 4914 (DACB).

Cyperus tenuispica Steud., Syn. Pl. Glumac. 2: 11. 1854. Herb, rarely occurs in open, wet and grassy areas. Fl. & fr.: Jan-December. Use: Soil binder. RS: KKI 4930 (DACB).

Eleocharis geniculata (L.) Roem. & Schult., Syst. Veg. 2: 150. 1817. BN: *Jora ghashi*. Herb, commonly found in open wet ground near rice fields. Fl. & fr.: June-September. Use: Plant is used as fodder. RS: KKI 4929 (DACB).

Eleocharis congesta D. Don, Prodr. Fl. Nepal. 41. 1825. Herb, occasionally occurs in margin of ditches and rice fields. Fl. & fr.: September-April. Use: Soil binder. RS: KKI 3763 (DACB).

Fimbristylis dichotoma (L.) Vahl., Enum. Pl. Obs. 2: 287. 1805. BN: *Mati chech*. Herb, commonly occurs in cultivated ground. Fl. & fr.: Throughout the year. RS: MAH 181 (DACB).

Fimbristylis quinquangularis (Vahl) Kunth, Enum. Pl. 2: 229. 1837. Herb, rarely occurs in wet grassy places and rice fields. Fl. & fr.: Throughout the year. RS: MAH 185 (DACB).

Fimbristylis squarrosa Vahl, Enum. Pl. Obs. 2: 289. 1805. Herb, commonly occurs in wet sand soils. Fl. & fr.: June-November. RS: KKI 4977 (DACB).

Fuirena ciliaris (L.) Roxb., Hort. Bengal. 81. 1814. Herb, occasionally occurs in open wet or swampy places. Fl. & fr.: September-February. RS: MAH 196 (DACB).

Schoenoplectiella articulata (L.) Lye, Lidia 6: 20. 2003. *Schoenoplectus articulatus* (L.) Palla. BN: *Patpati ghashi*, *Chechra*. Herb, commonly occurs in open marshy places, rice fields, and margins of ponds. Fl. & fr.: October-March. Use: Medicinally roots and branches used in baby's vomiting and diarrhoea. RS: KKI 4992 (DACB).

POACEAE Barnhart

Bambusa balcooa Roxb., Fl. Ind. ed. 1832, 2: 196. 1832. *Arundarbor balcooa* (Roxb.) Kuntze. BN: *Borakbash*. Tufted clumps, planted and naturalized. Fl. & fr.: March-September. Use: Culms are used for building materials for houses, leaves are used as fodder and young shoots are eaten as vegetables. RS: MAH 172 (DACB).

Bambusa tulda Roxb. Fl. Ind. ed. 1832, 2: 193. 1832. BN: *Mirtinga*, *Mitinga*. Loosely tufted clump, occasionally occurs in well-drained sandy loams. Fl. & fr.: September-May. Use: Culms are used for making houses, scaffolding and furniture, agricultural implements, mats and basketry works; young shoots are eaten as vegetable. RS: KKI 5040 (DACB).

Bambusa vulgaris Schrad., Coll. Pl. 2: 26. 1808. BN: *Baria Bans*, *Bangla Bans*. Moderately tufted clump, rarely occurs near watercourses. Fl. & fr.: Irregular. Use: House post, agricultural implements and young shoots are eaten as vegetable. RS: KKI 3854 (DACB).

Brachiaria ramosa (L.) Stapf, Fl. Trop. Afr. 9: 542. 1919. Herb, occasionally occurs west lands and moist places. Fl. & fr.: April-October. Use: Soil binder. RS: KKI 4931 (DACB).

Centotheca lappacea (L.) Desv., Nouv. Bull. Soc. Sci. Philom. Paris 2: 189. 1810. BN: *Centughas*. Herb, occasionally occurs in shady place near water bodies. Fl. & fr.: June-October. RS: KKI 3757 (DACB).

Cryptococcum patens (L.) A. Camus, Bull. Mus. Hist. Nat. Paris 27: 118. 1921. BN: *Patcocca*. Herb, occasionally occurs in moist places. Fl. & fr.: Throughout the year. RS: KKI 3788 (DACB).

Dactyloctenium aegyptium (L.) Willd., Enum. Pl. 1029. 1809. BN: *Makra*. Herb, rarely occurs in sandy low areas. Fl. & fr.: Throughout the year. Use: Fodder and soil binder. RS: KKI 3719 (DACB).

Desmostachya bipinnata (L.) Stapf, Fl. Cap. 7: 632. 1900. BN: *Kusha*. Herb, rarely occurs in moist places. Fl. & fr.: March-April. RS: MAH 170 (DACB).

Eragrostis cilianensis (All.) Janch., Mitt. Naturwiss. Vereins Univ. Wien 5: 110. 1907. Herb, occasionally occurs in forest margins. Fl. & fr.: June-November. Use: Plant is used as fodder. RS: MAH 194 (DACB).

Lophatherum gracile Brongn., Voy. Monde Phan.: 50. 1831. Herb, rarely occurs under the shade of the tree. Fl. & fr.: August-December. Use: Plant is used as fodder. RS: KKI 3796 (DACB).

Melocanna baccifera (Roxb.) Kurz. Prelim. Rep. For. Veg. Pegu. App. B.: 94.1875. BN: *Mullibansh, Paiyya*. Diffusely clumped, occasionally occurs in degraded forests areas. Fl. & fr.: April-September. Use: Culm is used for making houses, basketry and other domestic works and young shoots are eaten as vegetables. RS: KKI 4968 (DACB).

Oplismenus compositus (L.) P.Beauv., Ess. Agrostogr. 54. 1812. BN: *Gour*. Herb, occasionally occurs in scrub jungles and forest margins. Fl. & fr.: August-September. RS: KKI 3698 (DACB).

Panicum auritum J. presl ex Nees., Fl. Bras. Enum. Pl. 2: 176. 1829. *Panicum javanum* Nees ex Buse. Grass. Herb, occasionally occurs in lowlands and damp areas. Fl. & fr.: May-December. Use: Plant is used as fodder. RS: KKI 3728 (DACB).

Paspalum vaginatum Sw., Prodr. Veg. Ind. Occ. 2. 1788. Herb, rarely occurs in wet marshy areas. Fl. & fr.: December-March. Use: Plant is used as fodder. RS: MAH 182 (DACB).

Thyrsostachys oliveri Gamble, Ann. Roy. Bot. Gard. Calc. 7: 58, t. 50. 1896. BN: *Burma Bans*. Densely tufted clumps, occasionally occurs in dry and high areas. Fl. & fr.: November-February. Use: Culms are used for hut construction, rows of country boats, tents and broom handles. RS: KKI 4966 (DACB).

Zea mays L., Sp. Pl. ed. 1, 2: 971. 1753. BN: *Bhutta, Makai*. Herb, cultivated. Fl. & fr.: April-August. Use: Plants is grown for cereal or forage and also an important source of oil. RS: KKI 5028 (DACB).

BROMELIACEAE A.Juss.

Ananas comosus (L.) Merr., Interpr. Herb. Amboin.: 133. 1917. BN: *Anarash*. Herb, cultivated. Fl. & fr.: February-July. Use: Fibre and unripe fruit used in digestion, increases appetite and relieves dyspepsia and fruits are edible. RS: MAH 200 (DACB).

ZINGIBERACEAE Lindl.

Zingiber montanum (Koen) Dietr. in L., Sp. Pl. ed. 6. 1: 52. 1832. BN: *Bon ada*. Herb, occasionally occurs along road sides. Fl. & fr.: September-November. Use: Medicine and Spice. RS: MAH 115 (DACB).

Zingiber zerumbet (L.) Roscoe ex Sm., Exot. Bot. 2: 105. 1806. BN: *Bon ada*. Herb, occasionally occurs in forest thickest mainly shady areas. Fl. & fr.: July-September. Use: Medicine and ornamental. RS: KKI 3690 (DACB). **Plate 4E.**

COSTACEAE Nakai

Cheilocostus speciosus (J.König) C.Specht, Taxon 55: 159. 2006. *Costus speciosus* (J.König) Sm. BN: *Keumul, Kemul, Khustha*. Herb, occasionally occurs in forest thickets. Fl. & fr.: September-December. Use: Medicine. RS: KKI 3774 (DACB).

PONTEDERIACEAE Kunth

Monochoria hastata (L.) Solms, A.DC., Mon. Phan. 4: 523. 1883. *Carigolahastata* (L.) Raf. BN: *Boronukha*. Herb, occasionally occurs in water bodies near chara. Fl. & fr.: Throughout the year. Use: Plant used as fodder. RS: MAH 193 (DACB).

LILIACEAE A.Juss.

Curculigo orchioides Gaertn., Fruct. Sem. Pl. 1: 63. 1788. *Curculigo malabarica* Wight. BN: *Talmuli*. Herb, rarely occurs in forest beds mainly highland areas. Fl. & fr.: June-August. Use: Plant is used for the treatment of arthritis of the lumbar and knee joints. RS: MAH 111 (DACB).

Gloriosa superba L., Sp. Pl. 305. 1753. BN: *Ulotchandal*, *Ognisikha*. Herb, rarely occurs in forest beds mainly highland areas. Fl. & fr.: June-September. Use: Rhizomes are rich in the alkaloid colchicine and used as medicine. RS: MAH 224 (DACB).

SMILACACEAE A.Vent.

Smilax ovalifolia Roxb., Fl. Ind. ed. 3: 794. 1832. *Smilax macrophylla* Roxb. BN: *Kumarilata*. Climber, occasionally occurs in shady place of forest thickets. Fl. & fr.: November-March. Use: Roots are used for treating dysentery and rheumatism. RS: KKI 5037 (DACB).

DIOSCOREACEAE R.Br.

Dioscorea alata L., Sp. Pl.: 1033. 1753. BN: *Mate alu*, *Chupri alu*. Climber, commonly occurs on tree trunk. Fl. & fr.: August-December. Use: Leaves are eaten as vegetable. RS: KKI 5019 (DACB).

Dioscorea glabra Roxb., Fl. Indica ed. 3: 804. 1832. *Dioscorea hongkongensis* Uline ex R.Knuth. BN: *Shora-alu*. Climber, occasionally occurs in dried areas over bushes. Fl. & fr.: September-December. Use: Tuber eaten as vegetable. RS: KKI 3772 (DACB).

Dioscorea pentaphylla L., Sp. Pl.: 1032. 1753. BN: *Kanta alu*, *Jhum Alu*. Climber, rarely occurs on bush and on tree trunk. Fl. & fr.: July-December. Fl. & fr.: September-December. Use: Tuber is eaten as vegetable. RS: KKI 3726 (DACB).

ORCHIDACEAE A.Juss.

Acampe praemorsa (Roxb.) Blatt & Mc.Cann, J. Bombay Nat Hist. Soc. 35: 495. 1932. *Acampe papillosa* (Lindl.) Lindl. BN: *Mar*. Epiphytic herb, rarely occurs on tree trunk in forest. Fl. & fr.: November-January. Use: Plant is used in stomachache, earache and wounds treatment. RS: KKI 4947 (DACB).

Geodorum densiflorum (Lam.) Schl., Repert. Spec. Nov. Regni Veg. Beih. 4: 259. 1919. BN: *Adaphul*. Herb, rarely occurs in grassy and swamp areas. Fl. & fr.: June-September. Use: Root paste is used as insecticide and wounds healing. RS: KKI 4963 (DACB). **Plate 2E.**

Rhynchosyilis retusa (L.) Blume, Bijdr.: 286. 1825. *Aerides guttata* (Lindl.) Roxb. BN: *Shial leza pargacha*. Herb, rarely occurs on tree trunk in forest. Fl. & fr.: May-July. Use: Ornamental. RS: KKI 4967 (DACB).

MAGNOLIOPSIDA (DICOTS)**ANNONACEAE**

Milium velutina (Dunal) Hook. f. & Thom., Fl. Ind.: 139. 1855. BN: *Gandhi-gajari*. Deciduous tree, commonly occurs in forest beds. Fl. & fr.: October-June. Use: Edible fruits are wildlife supportive also used as firewood. RS: KKI 5013 (DACB). **Plate 3B.**

LAURACEAE A.Juss.

Litsea monopetala (Roxb.) Pers., Syn. Pl. 2: 4 1806. *Litsea polyantha* Juss. BN: *Huoria, Meda*. Evergreen tree, commonly occurs in thickets and sunny slopes. Fl. & fr.: March-November. Use: Leaves are used as a medicine for the treatment of arthritis. RS: KKI 5012 (DACB).

Litsea glutinosa (Lour.) C.B. Rob., Philipp. J. Sci. 6: 321. 1911. *Sebifera glutinosa* Lour. BN: *Kharajura gachh*. Evergreen tree, occasionally occurs in thickets and scrub forest. Fl. & fr.: April-January. Use: Paste of the stem bark is used in fractured bone; fruit pulps are eaten. RS: MAH 208 (DACB).

PIPERACEAE Giseke

Peperomia pellucida (L.) Kunth, Nov. Gen. Sp. 1: 64. 1816. BN: *Lucipata, Peparomia*. Herb, occasionally occurs in hill slope and forest bed. Fl. & fr.: July-September. Use: Leaves are eaten as vegetable; plant is used for gastrointestinal and respiratory tract disorders. RS: KKI 3691 (DACB).

MENISPERMACEAE A.Juss.

Tinospora sinensis (Lour.) Merr., Sunyatsenia 1(4): 193. 1934. BN: *Padma Gulancha*. Climber, commonly occurs in scrub forest. Fl. & fr.: January-June. Use: Plant is used in fever, jaundice and dysentery. RS: KKI 4924 (DACB).

Stephania japonica (Thunb.) Miers, Ann. Mag. Nat. Hist. 18: 14. 1866. *Menispermum japonicum* Thunb.. BN: *Nimukha*. Climber, commonly occurs in scrub jungles, forest edges, and on hedge plants. Fl. & fr.: Throughout the year. Use: Root is used in fever, diarrhea and urinary diseases. RS: MAH 136 (DACB).

ULMACEAE Mirbel

Trema orientalis (L.) Blume, Mus. Bot. 2: 62. 1856. *Sponia orientalis* (L.) Decene. BN: *Naila gach*. Evergreen tree, rarely occurs in moist forests, dry scrub of open places. Fl. & fr.: January-June. Use: Plant is used for making match-box, fishing boat and tea chests; also use as firewood. RS: KKI 3737 (DACB).

MORACEAE Trinius

Artocarpus chama Buch.-Ham., Mem. Wern. Nat. Hist. Soc. 5: 331. 1826. BN: *Chapalish, Kathalicham*. Deciduous tree, commonly occurs in forest. Fl. & fr.: April-August. Use: Edible fruits are wild life supportive; wood is used for light construction, for making boxes, crates, wooden pallets and veneer. RS: KKI 5002 (DACB).

Ficus benjamina L., Mant. Pl. 129. 1767. *Ficus comosa* Roxb. BN: *Jiri bot*. Evergreen tree, Planted. Fl. & fr.: July-November. Use: Planted as avenue tree and wood is used firewood. RS: MAH 218 (DACB).

Ficus benghalensis L., Sp. Pl. 1059. 1753. *Ficus procera* Salisb. BN: *Bot, Botgach*. Evergreen tree, planted. Fl. & fr.: May-August. Use: Infusion of young buds is used in dysentery, diarrhoea and diabetes; wood is used fire wood. RS: MAH 231 (DACB).

Ficus heterophylla L.f., Suppl. Pl. 442. 1782. *Ficus scabrella* Roxb. BN: *Bhui-dumur, Gaori-sheora*. Shrub, occasionally occurs in shady and marshy areas. Fl. & fr.: November-February. Use: Leaf juice mixed with milk is given in dysentery. RS: MAH 209 (DACB).

Ficus hispida L.f., Suppl. Pl. 442. 1782. *Ficus daemonum* K.D. Koenig ex Vahl, Enum. BN: *Kak dumur*. Evergreen tree, occasionally occurs in open and swamp places. Fl. & fr.: January-

December. Use: Unripe green fruits are eaten as vegetables; juice of the root is used fever. RS: KKI 5038 (DACB).

Ficus rumphii Blume, Bijdr. 437. 1825. BN: *Jhula bot, Gajna*. Deciduous tree, occasionally occurs along forest trails. Fl. & fr.: May-August. Use: Fully ripe fruits edible raw or cooked. RS: KKI 5038 (DACB).

URTICACEAE A.Juss.

Laportea interrupta (L.) Chew, Gard. Bull. Sing. 21: 200. 1965. BN: *Lal Bichuti*. Herb, rarely occurs in roadside under shady areas. Fl. & fr.: August-November. Use: Medicinally used in dysentery, fevers, dyspepsia and liver disorder. RS: MAH 204 (DACB).

AMARANTHACEAE A.Juss.

Achyranthes aspera L., Sp. Pl. 204. 1753. BN: *Apang*. Herb, commonly occurs in open dry places along forest trails. Fl. & fr.: June-October. Use: Medicinally is used in boils, asthma, bronchitis, cold, dysentery, earache, headache and skin diseases. RS: KKI 5007 (DACB).

Alternanthera sessilis (L.) R.Br. ex DC., Cat. Pl. Horti Monsp. 77. 1813. *Gomphrena sessilis* L. BN: *Senchi shak*. Herb, commonly occurs in damp cultivated area. Fl. & fr.: Throughout the year. Use: Leaves and tender tops are eaten as vegetables; plant is used in diarrhoea and dysentery. RS: KKI 3747 (DACB).

Amaranthus spinosus L., Sp. Pl. 991. 1753. BN: *Khuira kata, Kanta-nutia*. Herb, commonly occurs in Waste lands and roadsides. Fl. & fr.: Throughout the year. Use: Young stems are eaten as vegetable. RS: MAH 140 (DACB).

Amaranthus viridis L., Sp. Pl. 1405. 1763. *Pyxidium viride* (L.) Moq. BN: *Noyta sak*. Herb, commonly occurs in waste ground and road sides. Fl. & fr.: January-December. Use: Leaves eaten as a vegetable; plant is used to stop dysentery and inflammations. RS: MAH 125 (DACB).

Cyathula prostrata (L.) Blume, Bijdr. 549. 1826. BN: *Shyontula*. Herb, commonly occurs in forest bed. Fl. & fr.: September-November. Use: Plant in used rheumatic fever, dysentery and wounds. RS: KKI 3783 (DACB).

DILLENIACEAE Salisb.

Dillenia pentagyna Roxb., Pl. Coromandel 1: 21. 1795. *Dillenia augusta* Roxb. BN: *Bonchalta*. Deciduous tree, occasionally occurs in moist shady places. Fl. & fr.: January-June. Use: Medicinally used in wound healing, diabetes, and diarrhoea; wood is used for planking, house posts and furniture. RS: KKI 3880 (DACB).

Dillenia indica L., Sp. Pl. 535. 1753. BN: *Chalta*. Evergreen tree, occasionally occurs in forest beds. Fl. & fr.: May-February. Use: Fruits are eaten as vegetables and also used for relief of indigestion, asthma, influenza and rheumatic pain. RS: MAH 233 (DACB).

DIPTEROCARPACEAE Blume

Dipterocarpus turbinatus C.F. Gaertn, Suppl. Carp. 3: 51. 1805. BN: *Teligarjan, Kali garjan*. Deciduous tree, planted and naturalized. Fl. & fr.: March-June. Use: Timber is used in construction, making boxes and furnitures. RS: KKI 3844 (DACB).

Shorea robusta Gaertn., Suppl. Carp. 48. 1805. Evergreen tree, very commonly occurs throughout the forest. Fl. & fr.: April-May. Use: Timber is used in construction, making poles and furnitures. RS: KKI 5021 (DACB). **Plate 3F.**

CLUSIACEAE Lindl.

Hypericum japonicum Thunb., Syst. Veg. ed. 14. 702. 1784. BN: *Japani hyper.* Herbs, occasionally occurs on forest bed along the water bodies. Fl. & fr.: March-November. Use: Plant is used in the treatment of asthma and dysentery and acute hepatitis. RS: MAH 256 (DACB). **Plate 2F.**

Mesua ferrea L., Sp. Pl. 2, 1: 734. 1762. *Mesua nagassarium* (Burm. f.) Kosterm. BN: *Nagchampa, Nageshwar.* Evergreen tree, planted. Fl. & fr.: February-October. Use: Wood is used for heavy construction (posts, beams, rafters, joists, columns) and heavy duty flooring and furniture. RS: MAH 211 (DACB).

ELAEOCARPACEAE DC.

Elaeocarpus serratus L., Sp. Pl. 515. 1753. BN: *Jalpai.* Evergreen tree, planted. Fl. & fr.: March-December. Use: Raw or cooked fruit edible and used in dysentery and diarrhoea. RS: KKI 3894 (DACB).

TILIACEAE A.Juss.

Corchorus aestuans L., Syst. Nat. 2: 1079. 1759. *Corchorus fuscus* Roxb. BN: *Bon pat.* Herb, commonly occurs in sandy and grassy area. Fl. & fr.: August-February. Use: Leaves are eaten as vegetables and good quality fiber is obtained from the bark. RS: KKI 37692 (DACB).

Corchorus capsularis L., Sp. Pl.: 529. 1753. BN: *Nalitapat, Deshi-pat.* Herb, cultivated. Fl. & fr.: June-November. Use: Leaves are eaten as vegetables and good quality fiber is obtained from the bark. RS: KKI 37692 (DACB).

Grewia asiatica L., Mant. Pl. 1: 122. 1767. *Grewia subinaequalis* DC. BN: *Pholsa.* Shrub, commonly occurs in forest thickets. Fl. & fr.: November-January. Use: Rope made from the bark and leaves are used in pustular eruptions. RS: KKI 4973 (DACB).

Grewia nervosa (Lour.) Panigrahi, Taxon 34: 702. 1985. *Microcos paniculata* L. BN: *Pichandi, Asar.* Shrub, commonly occurs in forest thickets. Fl. & fr.: Throughout the year. Use: Firewood. RS: KKI 3735 (DACB).

Triumfetta pentandra A.Rich. in Guill. & Perr., Fl. Senegamb. Tent. 1: 93. 19. 1831. Herb, occasionally occurs in shady and marshy fallow land. Fl. & fr.: November-March. RS: KKI 3430 (DACB).

Triumfetta rhomboidea Jacq., Syst. Pl. 22. 1760. BN: *Bon okra.* Shrub, commonly occurs in sunny areas. Fl. & fr.: August-January. Use: Fresh root scrapings are applied as a poultice on sores and small wounds. RS: KKI 3727 (DACB).

STERCULIACEAE Salisb.

Sterculia villosa Roxb., Fl. Ind., ed. 1832, 3: 153. 1832. *Sterculia ornata* Wall ex Kurz 1873. BN: *Udal, Chandul.* Deciduous tree, cultivated. Fl. & fr.: March-May. Use: Fire wood and coarse fiber obtained from the inner bark is used for making ropes, cordage and bags. RS: MAH 165 (DACB).

Waltheria indica L., Sp. Pl. 673. 1753. BN: *Khardudha.* Perennial herb, occasionally occurs in grassy wet places. Fl. & fr.: January-December. Use: A decoction of the leafy stems is used in coughs, colds and hypertension. RS: KKI 3859 (DACB).

BOMBACACEAE Kunth

Bombax ceiba L., Sp. Pl. 511. 1753. *Bombax aculeatum* L. BN: *Shimul.* Deciduous tree, planted. Fl. & fr.: January-May. Use: Fiber obtained from the inner bark is used for making ropes, cordage and bags; medicinally used in cholera, urinary complaints and abdominal pain. RS: KKI 4935 (DACB).

MALVACEAE A.Juss.

Sida cordata (Burm.f.) Borss.Walk., Blumea 14: 182. 1966. *Melochia cordata* Burm.f. BN: *Junka, Suntal*. Herb, commonly occurs in forest margins. Fl. & fr.: Throughout the year. Use: Juice of the plant is applied to boils and pimples. RS: KKI 3750 (DACB).

Sida cordifolia L., Sp. Pl. 684. 1753. *Sida conferta* Link. BN: *Berela*. Herb, commonly occurs in forest bed. Fl. & fr.: September-December. Use: Medicinally used in asthma, allergies, fatigue, erectile dysfunction and cold. RS: KKI 5006 (DACB).

Thespesia lampas (Cav.) Dalzell, Fl. 19. 1861. BN: *Bon karpus*. Shrub, occasionally occurs in forest open places and thickets. Fl. & fr.: August-December. Use: Roots and fruits are used in gonorrhoea and syphilis RS: KKI 3778 (DACB).

Urena lobata L., Sp. Pl. 692. 1753. BN: *Congo-pat, Ban-okhra*. Shrub, commonly occurs in all around forest thickets. Fl. & fr.: Throughout the year. Use: Medicinally used in bowel complaints, stomach-ache, diarrhoea and dysentery. RS: KKI 4962 (DACB).

FLACOURTIACEAE DC.

Flacourtia indica (Brum.f.) Merr., Herb. Amboin. 377 1917. BN: *Boichi*. Shrub, occasionally grows in forest margins and in open places. Fl. & fr.: May-February. Use: Edible fruits are wild life supportive. RS: KKI 4939 (DACB). **Plate 2C.**

Flacourtia jangomas (Lour.) Raeusch., Nomencl. Bot. 3: 290. 1797. *Stigmarota jangomas* Lour. BN: *Lukluki*. Small evergreen tree, rarely occurs in forest edges. Fl. & fr.: March-October. Use: Edible fruits are wild life supportive, fruits and leaves are used in diarrhoea. RS: KKI 3793 (DACB).

BIXACEAE Link

Bixa orellana L., Sp. Pl. 512. 1753. BN: *Doigota*. Evergreen tree, rarely occurs in forest margins and thickets. Fl. & fr.: October-June. Use: Aril yields dye, which is used for colouring different food stuffs, also for wool, calico goods, paints, varnish, lacquer and soap. RS: MAH 143 (DACB). **Plate 1B.**

CUCURBITACEAE A.Juss.

Coccinia grandis (L.) Voigt, Hort. Suburb. Calc.: 59. 1845. BN: *Telakucha*. Herb, commonly occurs in grasslands, roadsides, hedges and forests. Fl. & fr.: March-December. Use: Leaves are eaten as vegetables and juice of the roots and leaves are used in diabetes. RS: KKI 3837 (DACB).RS: MAH 99 (DACB).

Luffa cylindrica (L.) Roem., Fam. Nat. Syn. Monogr. 2: 63. 1846. *Luffa aegyptiaca* Mill. BN: *Dhundul, Titpola*. Herb, escaped from cultivation. Fl. & fr.: June-December. Use: Fruits are eaten as vegetables. RS: KKI 3837 (DACB).

Mukia maderaspatana (L.) Roem., Fam. Nat. Syn. Monogr. 2: 47. 1846. *Melothria maderaspatana* (L.) Cogn. BN: *Agmukhi, Bilari*. Climber, rarely occurs in open damp places. Fl. & fr.: June-December. Use: The leaf-sap is used in wound-dressing. RS: KKI 3733 (DACB).

CAPPARACEAE A.Juss.

Capparis zeylanica L., Sp. Pl. ed. 2: 720. 1762. BN: *Azarilata*. Climber, occasionally occurs in thickets. Fl. & fr.: February-October. Use: Ripe fruits are eaten, tender fruits are picked and used in curries. RS: KKI 4941 (DACB). **Plate 1E.**

BRASSICACEAE Burnett

Rorippa indica (L.) Hiern, Cat. Afr. Pl. 1: 1896. BN: *Bansarisha*. Herb, occasionally occurs in roadsides and field margins. Fl. & fr.: April-October. Use: Seeds are used in asthma. RS: KKI 4943 (DACB).

SAPOTACEAE A.Juss.

Madhuca longifolia (Koenig) Macbr., Contr. Gray Herb. Harv. Uni. 53: 17. 1918. BN: *Mohua*, *Mua*. Deciduous tree, planted. Fl. & fr.: March-August. Use: Stem bark is used in leprosy, Flowers are used in bronchitis and cough. RS: MAH 205 (DACB).

Mimusops elengi L., Sp. Pl. 349 1753. BN: *Bokul*. Evergreen tree, planted. Fl. & fr.: March-June. Use: Bark decoction is used in gums and teeth; wood is used for heavy constructional work and also has ornamental value. RS: MAH 95 (DACB).

EBENACEAE Gürke

Diospyros discolor Willd., Sp. Pl. 4: 1108. 1806. *Diospyros blancoi* A.DC. BN: *Beelati Gab*. Evergreen tree, planted. Fl. & fr.: March-August. Use: Edible fruits are wild life supportive, wood is used for making rulers, musical instruments, walking sticks, handles and light furniture. RS: MAH 95 (DACB).

MIMOSACEAE R.Br.

Acacia auriculiformis Benth., London J. Bot. 1: 377. 1842. BN: *Akashmoni*. Evergreen tree, planted. Fl. & fr.: June-February. Use: Wood is used for making paper and furniture; also used as firewood. RS: MAH 249 (DACB).

Albizia lebbek (L.) Benth., London J. Bot. 3: 87. 1844. *Mimosa lebbeck* L. BN: *Kala-koroi*, *Sirish*. Deciduous tree, planted. Fl. & fr.: April-December. Use: Timber is used for making furniture, veneer, carving, and other small specialty wood items. RS: KKI 4949 (DACB).

Leucaena leucocephala (Lam.) de Wit, Taxon 10(2): 54. 1961. BN: *Epil-epil*. Deciduous tree, occasionally occurs in scrubland and grassland. Fl. & fr.: March-December. Use: Young leaves, pods and flower buds are edible. RS: KKI 3981 (DACB).

Mimusa pudica L., Sp. Pl. 1: 518. 1753. BN: *Lal lajjabati*. Herb, occasionally occurs in sunny places of forest edges. Fl. & fr.: Throughout the year. Use: Plant is a good soil binder and also used as an ornamental plant. RS: MAH 96 (DACB).

CAESALPINIACEAE R.Br.

Bauhinia acuminata L., Sp. Pl. 1: 376. 1753. BN: *Sada kanchon*. Shrub, planted. Fl. & fr.: May-July. Use: Leaves, roots and flowers are used medicinally also have ornamental value. RS: KKI 5017 (DACB).

Bauhinia purpurea L., Sp. Pl. 1: 375. 1753. BN: *Devakanchan*, *Raktakanchan*. Evergreen tree, planted. Fl. & fr.: November-May. Use: Flower buds and flowers cooked and eaten as vegetables also has ornamental value. RS: KKI 4917 (DACB).

Caesalpinia pulcherrima (L.) Swartz, Obs. Bot. Ind. Occ.: 166. 1791. BN: *Radhachura*, *Choto-krisnachura*. Shrub, planted. Fl. & fr.: throughout the year. Use: Ornamental tree and infusion of the flowers is used for remedy of cough, asthma and malarial fever. RS: MAH 229 (DACB).

Cassia fistula L., Sp. Pl. 1: 377. 1753. *Cassia rhombifolia* Roxb. BN: *Badar lathi*, *Sonalu*. Deciduous tree, planted and naturalized. Fl. & fr.: April-May. Use: Wood is excellent for posts, construction and agricultural implements; also used as firewood. RS: MAH 174 (DACB).

Delonix regia (Bojer *ex* Hook.) Raf., Fl. Tellur. 2: 92. 1836. *Poinciana regia* Hook. BN: *Krishnachura*. Deciduous tree, planted. Fl. & fr.: April-September. Use: Plant is used as ornamental and shade tree. RS: MAH 245 (DACB).

Senna tora (L.) Roxb., Fl. Ind. (Roxb.) 2: 340. 1832. *Cassia tora* L. BN: *Terj. Araji*. Herb, commonly occurs in open fallow areas. Fl. & fr.: August-December. Use: Leaves are used in the treatment of ringworm and skin diseases. RS: KKI 3731 (DACB).

FABACEAE Lindl.

Abrus precatorius L., Syst. Nat. ed. 12, 2: 472. 1767. BN: *Kunch, Ratti*. Climber, commonly occurs trailing over thickets and hedges in open or shady places. Fl. & fr.: July-September. Use: Tender young leaves are eaten as vegetables and roots are used in digestive disorders. RS: KKI 5004 (DACB). **Plate 1A.**

Alysicarpus vaginalis (L.) DC, Prodr. 2: 353. 1825. BN: *Pannata*. Herb, rarely occurs in open grassy slopes and road sides. Fl. & fr.: July-September. Use: Medicinally used in wounds and bone fractures. RS: KKI 4994 (DACB).

Butea monosperma (Lam.) Taub., Nat. Pflanzenfam. 3(3): 366. 131. 1894. BN: *Polash*. Deciduous tree, planted, Fl. & fr.: February-April. Use: Flowers are used in liver disorders and also has ornamental value. RS: KKI 4944 (DACB).

Cajanus cajan (L.) Millsp., Publ. Field. Mus. Nat. Hist. Bot. Ser. 2: 53. 1900. *Cajanus indicus* Spreng. BN: *Arhar*. Shrub, cultivated, Fl. & fr.: December-April. Use: Fruit edible and infusion of the flowers & leaves is used in diabetes. RS: KKI 4958 (DACB).

Clitoria ternatea L., Sp. Pl.: 753. 1753. BN: *Aparagita*. Climber, occasionally occurs open grassy areas. Fl. & fr.: June-March. Use: Young pods are eaten as a vegetables and also has ornamental values. RS: KKI 3745 (DACB).

Codariocalyx gyroides (Roxb. *ex* Link) Hassk., Flora. 25 (2, Beibl.): 49. 1842. *Desmodium gyroides* (Roxb. *ex* Link) DC. BN: *Codaridis*. Shrub, rarely occurs in grassy forest thickets. Fl. & fr.: August-January. Use: Grown as a ground cover and green manure. RS: KKI 3794 (DACB).

Dalbergia stipulacea Roxb., Fl. Ind., ed. 1832, 3: 233. 1832. *Dalbergia ferruginea* Roxb. BN: *Dadbari*. Woody climber, rarely occurs in open forested areas. Fl. & fr.: January-March. Use: Roots and leaves are used in gonorrhoea and aphthae. RS: KKI 5015 (DACB). **Plate 2A.**

Dalbergia rimosa Roxb., in Fl. Ind. (ed. Carey) 3: 23. 1832. BN: *Gojai lata*. Small deciduous tree, rarely occurs in open areas and in slopes. Fl. & fr.: March-December. Use: Stem is used for making axe handles. RS: KKI 3777 (DACB).

Desmodium gangeticum (L.) DC., Prodr. 2: 327. 1825. *Hedysarum gangeticum* L. BN: *Salpani*. Shrub, commonly occurs throughout the forest bed. Fl. & fr.: April-November. Use: Decoction of the leaves is used against stones in the gall bladder. RS: KKI 3707 (DACB). **Plate 2B.**

Desmodium laxiflorum DC., Ann. Sci. Nat. Paris 4: 100. 1825. BN: *Laximodi*. Shrub, commonly occurs in forest margins, thickets and grassy slopes. Fl. & fr.: August-December. RS: KKI 3817 (DACB).

Desmodium heterophyllum (Willd.) DC., Prodr. 2: 334. 1825. BN: *Bon motorshuti*. Occasionally occurs in road sides and forest margin. Fl. & fr.: July-October. Use: Plant is used in dysentery, rheumatism and fever. RS: KKI 3758 (DACB).

Desmodium triflorum (L.) DC., Prodr. 2: 334. 1825. BN: *Kulalia, Kodalia*. Herb, commonly occurs in plantation and roadside areas. Fl. & fr.: Throughout the year. Use: Plant is used for inducing sweat and promoting digestion. RS: KKI 4995 (DACB).

Flemingia strobilifera (L.) R.Br. in Ait, Hort. Kew 2(4): 350. 1812. *Hedysarum strobilifera* L. BN: *Sim Busak*. Shrub, commonly occurs in open dry places. Fl. & fr.: October-February. Use: Leaves and flowers are used in tuberculosis. RS: KKI 3870 (DACB). **Plate 2D.**

Indigofera tinctoria L., Sp. Pl. 2: 751. 1753. BN: *Nil gach*. Shrub, rarely occurs in open sunny places. Fl. & fr.: February-November. Use: Plant is used for sores, ringworm, blisters, hair rejuvenation and natural hair darkening. RS: KKI 3791 (DACB).

Phyllodium pulchellum (L.) Desv., J. Bot. Agric. 1: 124. 1813. *Desmodium pulchellum* (L.) Benth. BN: *Jatsalpani*. Shrub, occasionally occurs in forest thickets and dry grassy areas. Fl. & fr.: February-March. Use: Roots and leaves are used in fever. RS: KKI 3756 (DACB).

Pterocarpus indicus Willd., Sp. Pl. 3: 904. 1802. BN: *Paduak, Rakto Chandan*. Deciduous tree, cultivated. Fl. & fr.: March-June. Use: Plant is used as an avenue tree, yields good timber and infusion of leaves is given in fever. RS: MAH 104 (DACB).

Pueraria phaseoloides (Roxb.) Benth., J. Linn. Soc. Bot. 9: 125. 1867. *Dolichos phaseoloides* Roxb. BN: *Mugi-kunch*. Woody climber, occasionally occurs over rocks and on tree. Fl. & fr.: November-March. Use: Tuber is used as elephant food. RS: KKI 4964 (DACB).

Spatholobus acuminatus Benth. in Miq., Pl. Jung. 238. 1852. *Butea acuminata* Wall. ex Kurz. BN: *Palashya lata*. Climber, occasionally occurs in forest thickets. Fl. & fr.: August-December. RS: KKI 4919 (DACB).

Tadehagi triquetrum (L.) H.Ohashi, Ginkgoana 1: 290. 1973. *Desmodium triquetrum* (L.) DC. BN: *Luri manda*. Shrub, occasionally occurs in rice field and grassy areas. Fl. & fr.: January-July. Use: Infusion of the leaves is used in stomach discomfort. RS: KKI 3815 (DACB).

Tephrosia purpurea (L.) Pers., Syn. Pl. 2(2): 329. 1807. BN: *Bon neel*. Shrub, occasionally occurs in waste places and thickets. Fl. & fr.: September-January. Use: Medicinally used in leprosy, ulcers, asthma. RS: KKI 3746 (DACB).

LYTHRACEAE J.St.-Hil.

Cuphea hyssopifolia Kunth, Nov. Gen. Sp. 6: 199. 1824. *Parsonsia hyssopifolia* (Kunth) Standl. BN: *Kuphea*. Herb, cultivated. Fl. & fr.: Throughout the year. Use: Leaves and flowers are used in fevers and coughs and also has ornamental value. RS: KKI 4954 (DACB).

Lagerstroemia parviflora Roxb. var. **benghalensis** C. B. Clarke in Hook. f., Fl. Brit. Ind. 2: 576. 1879. BN: *Sidha Jarul, Tilla Jarul*. Deciduous tree, occasionally occurs in dry areas and forest margins. Fl. & fr.: April-December. Use: Wood is used for making agricultural implements, country boats, house posts and other construction purposes. RS: MAH 240 (DACB).

Lagerstroemia speciosa (L.) Pers., Syn. Pl. 2: 72. 1806. BN: *Jarul*. Deciduous tree, planted. Fl. & fr.: April-July. Use: Timber is used for making light furniture and also used as firewood. RS: KKI 3805 (DACB).

Rotala indica (Willd.) Koehne, Bot. Jahrb. Syst. 1: 172. 1881. BN: *Deshi ghurni*. Herb, commonly occurs in moist places and rice fields. Fl. & fr.: October-April. RS: KKI 5014 (DACB).

Woodfordia fruticosa (L.) Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 40(2): 56. 1871. *Lythrum fruticosum* L. BN: *Ragkat, Dhatriphul*. Evergreen tree, occasionally occurs in open waste places. Fl. & fr.: January-May. Use: Plant is used for dysentery, diarrhoea, ulcer and infections treatment. RS: KKI 3885 (DACB).

THYMELAEACEAE A.Juss.

Aquilaria malaccensis Lam., Encycl. 1(1): 49. 1783. *Aquilaria agallocha* Roxb. BN: *Agar*. Evergreen tree, planted. Fl. & fr.: May-September. Use: Medicinally used in asthma, bronchitis and rheumatism. RS: MAH 123 (DACB).

MYRTACEAE A.Juss.

Syzygium cumini (L.) Skeels, Bull. Bur. Pl. Industr. U.S.D.A. 248: 25. 1912. BN: *Jam*. Evergreen tree, planted. Fl. & fr.: March-June. Use: Edible fruits are wildlife supportive; wood is used for construction, boat building, commercial tea and chest plywood, agricultural implements; seeds and fruits are used in diabetes, irregular menstruation, diarrhea and dysentery. RS: KKI 4961 (DACB).

Syzygium fruticosum DC., Prodr. 3: 260. 1828. BN: *Bon-Jam*. Evergreen tree, occasionally occurs in villages, gardens, and naturalized along the forest margins. Fl. & fr.: March-June. Use: Edible fruits are wildlife supportive; leaf decoction is used in anaemia. RS: KKI 4969 (DACB).

Syzygium grande (Wight) Walp., repert. Bot. Syst. 2: 180. 1843. BN: *Dhaki jam*. Evergreen tree, commonly occurs in forest open places along trails. Fl. & fr.: March-August. Use: Fruits are wildlife supportive; timber is used for building purposes, boat and house construction. RS: KKI 4999 (DACB).

Psidium guajava L., Sp. Pl. 1: 470. 1753. BN: *Peyara*. Evergreen tree, planted. Fl. & fr.: Throughout the year. Use: Edible fruits are wildlife supportive, wood is used for wood-engraving, spear handles, instruments of various kinds and for charcoal. RS: MAH 228 (DACB).

ONAGRACEAE A.Juss.

Ludwigia hyssopifolia (G.Don) Exell, Garcia de Orta 5: 471. 1957. *Jussiaea hyssopifolia* G.Don. Herb, occasionally occurs in moist place of forest. Fl. & fr.: Throughout the year. Use: Fodder. RS: KKI 3759 (DACB).

Ludwigia perennis L., Sp. Pl. 119. 1753. *Ludwigia parviflora* Roxb., Fl. Indica 1: 440. 1820. Herb, commonly occurs in marshy and wet sites. Fl. & fr.: February-December. Use: Cooked leaves eaten as a vegetable. RS: KKI 4984 (DACB).

MELASTOMATACEAE A.Juss.

Melastoma malabathricum L., Sp. Pl. 1: 390. 1753. *Melastoma affine* D.Don. BN: *Bon tejpata*, *Tejbohol*. Shrub, commonly occurs in open places, thickets and near streams. Fl. & fr.: Throughout the year. Use: Leaves are used in diarrhoea and dysentery. RS: KKI 4915 (DACB)

COMBRETACEAE R.Br.

Terminalia arjuna (Roxb. ex DC.) Wight & Arn., Prodr. Fl. Ind. Orient. 314. 1834. BN: *Arjun*, *Kahu*. Deciduous tree, planted. Fl. & fr.: April-October. Use: Medicinally used in heart disease. RS: MAH 225 (DACB).

Terminalia bellirica (Gaertn.) Roxb., Pl. Coromandel 2: 54. 1805. BN: *Bohera*. Deciduous tree, planted. Fl. & fr.: March-December. Use: Fruits are used in coughs and eye diseases. RS: MAH 202 (DACB).

Terminalia chebula Retz., Observ. Bot. 5: 31. 1788. BN: *Horitoki*. Evergreen tree, planted. Fl. & fr.: April-October. Use: Medicinally used in chronic diarrhoea, constipation, and diabetes. RS: KKI 3781 (DACB).

LORANTHACEAE A.Juss.

Dendrophthoe falcata (L.f.) Ettingsh, Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 32: 52. 1872. BN: *Phorolla*, *Bajrangi*. Parasitic shrub, occasionally occurs on shrub and tree. Fl. & fr.: Throughout the year. Use: Medicinally used in ulcers, asthma, paralysis, skin diseases, tuberculosis and menstrual troubles. RS: KKI 3895 (DACB).

Viscum cruciatum Sieber *ex* Boiss., Voy. Bot. Espagne 2: 274. 1840. *Viscum orientale* Willd. BN: *Porgacha*. Parasitic shrub, occasionally occurs on tree trunk. Fl. & fr.: March- July. RS: KKI 4946 (DACB).

EUPHORBIACEAE A.Juss.

Antidesma acidum Retz., Observ. Bot. 5: 30. 1788. BN: *Chutki, Multa*. Deciduous tree, occasionally occurs in open moist places. Fl. & fr.: March-January. Use: Leaves are used in stomachache of children, digestion related issues and diabetes. RS: KKI 3869 (DACB).

Antidesma montanum Blume, Bijdr. Fl. Ned. India 1124. 1827. *Antidesma montanum* Blume var. *montanum* P.Hoffm. BN: *Choto shial buka*. Evergreen tree, occasionally occurs in thickets. Fl. & fr.: May-December. Use: Fruit is edible and roots are used in the treatment of stomachache. RS: KKI 5029 (DACB).

Aporosa aurea Hook.f., Fl. Brit. India 5: 351. 1887. BN: *Kechuan*. Evergreen tree, rarely occurs in forest margins. Fl. & fr.: October-February. Use: Wood is used for making household furniture. RS: KKI 4970 (DACB).

Aporosa octandra (Buch.-Ham. *ex* D. Don) A.R. Vickery, Enum. Fl. Pl. Nepal 3: 193. 1982. *Aporosa roxburghii* (Wall. *ex* Lindl.) Baill. BN: *Kokra*. Evergreen tree, rarely occurs in high area of the forest. Fl. & fr.: October-February. RS: MAH 154 (DACB).

Breynia vitis-idaea (Burm.f.) Fisch., Bull. Misc. Inform. Kew 1932: 65. 1932. *Rhamnus vitis-idaea* Burm.f. BN: *Vita salpoti*. Shrub, rarely occurs in forest edges and forest clearing. Fl. & fr.: March-December. Use: Bark is used to prevent haemorrhage. RS: KKI 4970 (DACB).

Bridelia retusa (L.) A.Juss., Euphorb. Gen. 109. 1824. *Clutia retusa* L. BN: *Kata koi*. Deciduous tree, occasionally occurs in sandy areas and in open places. Fl. & fr.: May-January. Use: Fruit is edible; bark is used for urinary concretion. RS: KKI 5022 (DACB). **Plate 1C.**

Bridelia stipularis (L.) Blume, Bijdr. 597. 1826. BN: *Kolata, Horinhara*. Shrub, commonly occurs in sunny places. Fl. & fr.: September-April. Use: Fruits are edible and wildlife supportive. RS: KKI 5011 (DACB).

Codiaeum variegatum (L.) Rumph. *ex* A.Juss., Euphorb. Gen. 80: 111. 1824. *Croton variegatus* L. BN: *Patabahar*. Shrub, planted. Fl. & fr.: Throughout the year. Use: Plnts is used in diarrhoea, stomach ache, external wounds treatment and ornamental. RS: KKI 3886 (DACB).

Jatropha gossypifolia L., Sp. Pl. 1006. 1753. *Manihot gossypifolia* (L.) Crantz. BN: *Sadajeol*. Shrub, rarely occurs in open sunny places. Fl. & fr.: April-August. Use: Leaves are used in eczema and itches and has ornamental value. RS: MAH 216 (DACB).

Mallotus philippensis (Lam.) Muell.-Arg., Linnaea 34: 196. 1865. *Croton philippensis* Lam. BN: *Kamalaguli, Kamela, Sinduri*. Evergreen tree, prarely occurs in deep forest. Fl. & fr.: Throughout the year. Use: Plant is used for the treatment of skin diseases, wound and intestinal worm. RS: KKI 5025 (DACB). **Plate 3A.**

Mallotus repandus (Rottler *ex* Willd.) Muell.-Arg., Linnaea 34: 197. 1865. BN: *Gunti, Jhante*. Shrubs, rarely occurs in shrubberies and open scrub lands. Fl. & fr.: December-April. Use: Roots are used in muscle pain and a liver disorders. RS: KKI 236 (DACB).

Manihot esculenta Crantz, Inst. Rei Herb. 1: 167. 1766. *Manihot diffusa* Pohl. BN: *Kasava, Shimul alu*. Shrub, occasionally occurs in dry areas. Fl. & fr.: Throughout the year. Use: Roots are eaten as vegetable. RS: MAH 242 (DACB).

Phyllanthus emblica L., Sp. Pl. 982. 1753. BN: *Amloki*. Deciduous tree, planted. Fl. & fr.: March-September. Use: Fruits are edible and used in diabetes, fever, anaemia, jaundice, bleeding disorders. RS: KKI 3874 (DACB).

Phyllanthus niruri L., Sp. Pl. 981. 1753. *Niruris annua* Raf. BN: *Bhui amla*. Herb, commonly occurs in clay soil in moist habitat. Fl. & fr.: August-October. Use: The plant is used as diuretic in gonorrhoea and other ailments of genito-urinary tract. RS: MAH 130 (DACB).

Suregada multiflora (A.Juss.) Baill., Étude Euphorb.: 396. 1858. BN: *Ban-naranga*, *Maricha*. Evergreen tree, rarely occurs in scrub forest and thickets. Fl. & fr.: March-October. Use: Seeds are edible, wood is used for preparing tool handles and also used as firewood. RS: MAH 219 (DACB).

RHAMNACEAE A.Juss.

Ziziphus jujuba (L.) Gaertn., Fruct. Sem. Pl. 1: 203. 1788. *Ziziphus mauritiana* Lam. BN: *Kul Boro*. Evergreen tree, planted. Fl. & fr.: March-September. Use: Ripe fruits are eaten fresh and wildlife supportive. RS: KKI 3734 (DACB).

Ziziphus oenoplia L., Gard. Dict. 1768. BN: *Bon Boro*, *Sialkul*. Scanted shrub, commonly occurs in roadside forest beds and thickets. Fl. & fr.: August-December. Use: Roots are useful in hyper acidity and ascari infection and also wildlife supportive. RS: KKI 5046 (DACB).

Ziziphus rugosa Lamk., Encycl. 3: 319. 1789. BN: *Jangli Boro*. Evergreen tree, commonly occurs in sparse forests and thickets. Fl. & fr.: August-December. Use: Fruits are edible; wood is used as firewood. RS: KKI 5008 (DACB). **Plate 4F.**

VITACEAE A.Juss.

Ampelocissus barbata (Wall.) Planch. in DC., Monogr. Phan. 5: 372. 1887. *Vitis barbata* Wall. BN: *Jarila-lahari*. Climber, occasionally grows on bushy thickets. Fl. & fr.: June-October. Use: Fruits are edible and wildlife supportive. RS: MAH 121 (DACB).

Cissus aristata Blume, Bijdr. 183. 1825. Climber, rarely occurs in forest slopes. Fl. & fr.: May-February. Use: Root powder is used for treating fractured bones, constipation and complex arthritis. RS: KKI 3808 (DACB).

Cissus elongata Roxb., Fl. Ind. 1: 411. 1820. *Vitis elongata* (Roxb.) Wall. LN. *Chemna*, *Dhemna*. Climber, commonly occurs in forest beds. Fl. & fr.: May-September. Use: Stems and leaves are eaten as vegetables. RS: KKI 4976 (DACB).

SAPINDACEAE A.Juss.

Litchi sinensis Sonner, Voy. India 3: 255. 1782. BN: *Lichu*. Evergreen tree, cultivated. Fl. & fr.: February-April. Use: Edible fruit are wildlife supportive and wood is used for making light furniture. RS: KKI 4972 (DACB).

Schleichera oleosa (Lour.) Oken., Allg. Naturgesch. Bot. 2: 1341. 1841. BN: *Joyna*, *Kusum*. Deciduous tree. Occasionally occurs along road sides and forest edges. Fl. & fr.: March-November. Use: Timber is used for the agricultural implements and cartwheels; ripe fruit is eaten raw and wildlife supportive. RS: MAH 173 (DACB). **Plate 3D.**

ANACARDIACEAE R.Br.

Semecarpus anacardium L.f., Suppl. Pl.: 182. 1781. *Anacardium officinarum* Gaertn. BN: *Bela*, *Beda*. Deciduous tree, occasionally occurs in open areas and forest margins. Fl. & fr.: March-December. Use: Fruits are edible and juice is used in the treatment of dysentery, fever and asthma. RS: KKI 4974 (DACB). **Plate 3E.**

Spondias pinnata (L.f.) Kurz, Prelim. Rep. Forest Pegu Appendix. 1875. *Mangifera pinnata* L. f. BN: *Bon Amra*, *Ambi-thong*. Deciduous tree, occasionally occurs in forest edges and open places. Fl. & fr.: February-August. Use: Fruits are edible and also wildlife supportive. RS: KKI 3831 (DACB). **Plate 4A.**

MELIACEAE A.Juss.

Aphanamixis polystachya Wall., Fl. Ind. 2: 429. 1824. BN: *Pitraj, Royna*. Evergreen tree, occasionally occurs in deep forests, and in thickets. Fl. & fr.: February-May. Use: Timber is used for house construction and makung furniture. RS: KKI 3784 (DACB).

Chukrasia tabularis A. Juss., Bull. Sci. Nat. Geol. 23: 241. 1830. BN: *Chikrass, Chikrassi*. Deciduous tree, occasionally occurs forest edges. Use: Timber is used for making furniture, musical instruments, interior joinery such as doors, windows and light flooring, sporting goods and for carving. RS: KKI 5000 (DACB).

Toona ciliata M. Roem., Fam. Nat. Syn. Monogr. 1: 139. 1846. *Cedrela serrulata* Miq. BN: *Toon, Piya, Piyatoon*. Deciduous tree, planted. Fl. & fr.: January-June. Use: Wood is used as for making high-grade furniture, interior trim, joinery, musical instruments, ornamental work, panelling, building materials, exterior uses. RS: KKI 4948 (DACB).

RUTACEAE A.Juss.

Citrus limon (L.) Osbeck, Reise Ostindien 250. 1765. *Citrus limonia* Osbeck. BN: *Gora lebu, Karna lebu*. Shrub, planted. Fl. & fr.: March-November. Use: Fruits are excellent preventative medicine also used as a drink and as a flavouring. RS: MAH 246 (DACB).

Citrus sinensis (L.) Osbeck, Reise Ostindien 250. 1765. BN: *Komola*. Evergreen tree. Fl. & fr.: November-April. Use: Fruit edible also used as a medicine for constipation, diarrhoea, bronchitis, tuberculosis, cough and cold. RS: KKI 5033 (DACB).

Glycosmis pentaphylla (Retz.) DC., Prodr. 1: 538. 1824. *Limonia pentaphylla* Retz. BN: *Motkila, Dat majani*. Evergreen tree, commonly occurs in forest margins and in thickets. Fl. & fr.: Throughout the year. Use: Fruits are edible; leaves are used as a cure for diarrhoea and dysentery. RS: KKI 4906 (DACB).

Murraya koenigii (L.) Spreng., Syst. Veg. 2: 315. 1817. *Bergera koenigii* L. BN: *Bar sunga, Gandhal*. Occasionally occurs in moist places. Fl. & fr.: February-May. Use: Plant is used in diarrhoea, coughs and jaundices also used as firewood. RS: KKI 5039 (DACB).

Murraya paniculata (L.) Jack, Malayan Misc. 1(5): 31. 1820. *Murraya exotica* L. BN: *Kamini*. Shrub, planted. Fl. & fr.: March-January. Use: Leaves are used in the treatment of diarrhoea and dysenter. RS: KKI 5047 (DACB).

Zanthoxylum rhetsa (Roxb.) DC., Prodr. 1: 728. 1825. *Fagara rhetsa* Roxb. BN: *Bazinali, Bajna*. Deciduous tree, occasionally occurs in forest margin and in dry open areas. Fl. & fr.: March-September. Use: Young leaves are eaten cooked as vegetables. RS: MAH 146 (DACB).

Plate 4D.**OXALIDACEAE** R.Br.

Averrhoa carambola L., Sp. Pl.: 428. 1753. BN: *Kamranga*. Deciduous tree, planted. Fl. & fr.: March-January. Use: Edible fruits are wildlife supportive, medicinally used in influenza fever. RS: MAH 232 (DACB).

Oxalis corniculata L., Sp. Pl. 435. 1753. BN: *Amrul, Chuka tripati, Amboli*. Herb, commonly occurs in shady moist soil. Fl. & fr.: September-May. Use: Leaves are used in fevers and biliousness. RS: MAH 195 (DACB).

APIACEAE Lindley

Centella asiatica (L.) Urban, Fl. Bras. 11(1): 287. 1879. *Hydrocotyle asiatica* L. BN: *Thankuni, Adamoni*. Herb, occasionally occurs in shady and marsh places. Fl. & fr.: March-December. Use:

Plant is used to heal wounds, improve mental clarity, and treat skin conditions and also eaten as vegetable. RS: KKI 4925 (DACB).

APOCYNACEAE A.Juss.

Allamanda cathartica L., Mant. Pl. 2: 214. 1771. BN: *Harkakra*. Shrub, cultivated. Fl. & fr.: Flowering almost throughout the year, fruiting more common in cold season. Use: Plant is used to treat liver tumors, jaundice and malaria. RS: KKI 3877 (DACB).

Alstonia scholaris (L.) R.Br., Asclepiadeae 75. 1810. *Echites scholaris* L. BN: *Chaitan, Chhatim*. Evergreen tree, occasionally occurs in open places and scrub forest. Fl. & fr.: November-May. Use: Wood is used for making packing boxes, furniture, coffins, blackboards; infusion of the bark is given in fevers, skin diseases, asthma, bronchitis and heart disease. RS: MAH 153 (DACB).

Ichnocarpus frutescens (L.) W.T. Aiton, Hortus Kew 2: 69. 1811. *Apocynum frutescens* L. BN: *Dudhi lata, Paralia lata, Shyamalata*. Shrub. Fl. & fr.: August-February. Use: Bark yields fibre used for making ropes and bags; roots and leaves have medicinal property. RS: KKI 3804 (DACB).

Cascabela thevetia (L.) Lippold, Feddes Repert. 91:52. 1980. *Thevetia peruviana* (Pers.) K.Schum. BN: *Kalki phul, Halde karabi*. Shrub, planted. Fl. & fr.: Throughout the year. Use: Decoction of the leaves is used in jaundice, fever and also has ornamental use. RS: MAH 145 (DACB).

Catheranthus roseus (L.) G. Don, Gen. Hist. 4: 1837. *Vinca rosea* L. BN: *Nayantara*. Herb, planted. Fl. & fr.: Throughout the year. Use: Root decoction is used in fever and also has ornamental value. RS: MAH 248 (DACB).

ASCLEPIADACEAE A.Juss.

Calotropis gigantea (L.) Dryand., Hortus Kew 2: 78. 1811. *Calotropis gigantea* (L.) R.Br. BN: *Akanda*. Shrub, occasionally occurs in arid and semi arid regions. Fl. & fr.: Throughout the year. Use: Plant is used in treating skin, digestive, respiratory, circulatory and neurological disorders. RS: KKI 4959 (DACB).

Tylophora longifolia Wight, Contr. Bot. India: 50. 1834. Shrub, rarely occurs in forest beds. Fl. & fr.: June-December. Use: Medicinally used in asthma treatment. RS: KKI 3711 (DACB).

SOLANACEAE A.Juss.

Physalis angulata L., Sp. Pl. 183. 1753. *Physalis ramosissima* Mill. BN: *Fotka*. Herb, occasionally occurs in sunny places, open forest areas and forest margins. Fl. & fr.: February-August. Use: Fruits are eaten as vegetables. RS: KKI 5042 (DACB).

Solanum virginianum L., Sp. Pl.: 187. 1753. BN: *Kantakari*. Herb, rarely occurs in dry sunny places, and on waste lands. Fl. & fr.: January-February. Use: Fruit is used in coughs and toothache. RS: KKI 4954 (DACB).

CONVOLVULACEAE A.Juss.

Evolvulus nummularius (L.) L., Sp. Pl. ed. 2: 391. 1762. BN: *Bhui akra*. Herb, rarely occurs in edges of fields, and waste places. Fl. & fr.: Throughout the year. Use: Plant is used in bronchial asthma treatment. RS: KKI 4985 (DACB).

Merremia hederacea (Burm. f.) Hallier f., Bot. Jahrb. 18: 118. 1894. BN: *Kaladana*. Climber, rarely occurs in thickets, and open grasslands. Fl. & fr.: October-January. Use: Medicinally used for treating acute tonsillitis. RS: KKI 3695 (DACB).

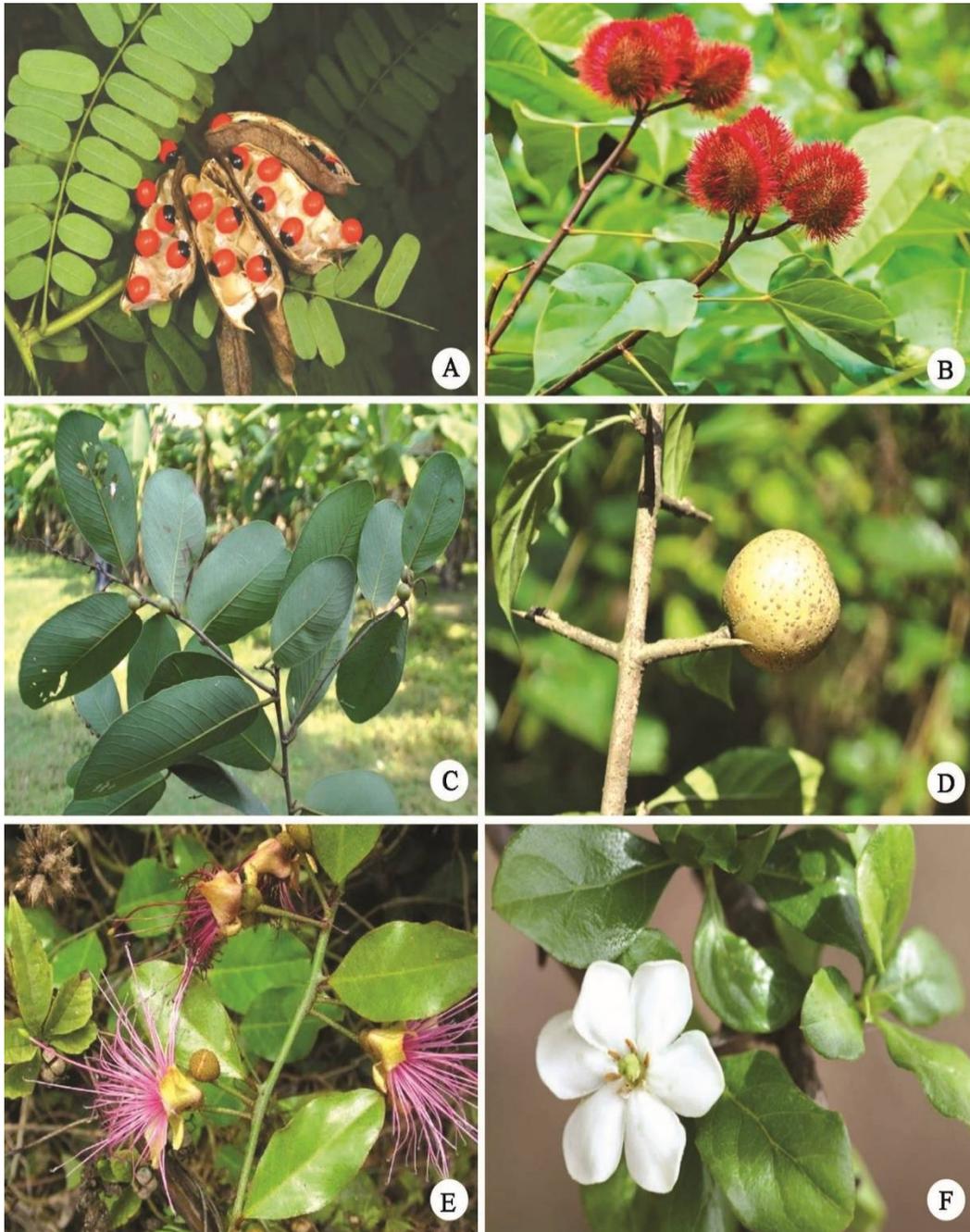


Plate 1. Photographs of some salient species of KgNP. A. *Abrus precatorius* L., B. *Bixa orellana* L. C. *Bridelia retusa* (L.) A.Juss., D. *Canthium coromandelicum* (Burm.f.) Alston, E. *Capparis zeylanica* L., F. *Catunaregam spinosa* (Thunb.) Tirveng.



Plate 2. Photographs of some salient species of KgNP. A. *Dalbergia stipulacea* Roxb., B. *Desmodium gangeticum* (L.) DC., C. *Flacourtia indica* (Brum.f.) Merr., D. *Flemingia strobilifera* (L.) R.Br., E. *Geodorum densiflorum* (Lam.) Schl., F. *Hypericum japonicum* Thunb.

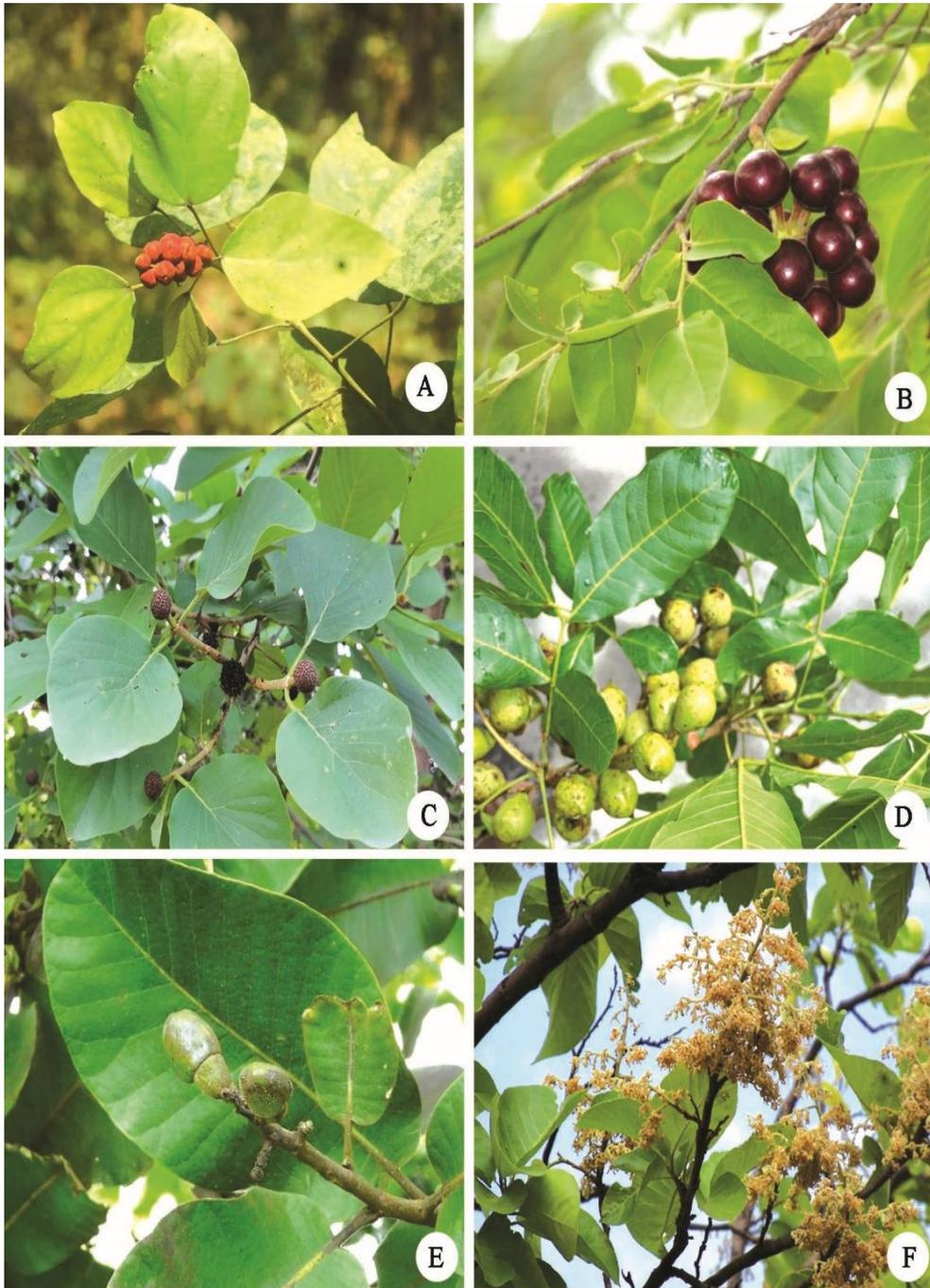


Plate 3. Photographs of some salient species of KgNP. A. *Mallotus philippensis* (Lam.) Muell.-Arg., B. *Miliusa velutina* (Dunal) Hook. f. & Thom., C. *Mitragnya parvifolia* (Roxb.) Korth., D. *Schleicheria oleosa* (Lour.) Oken., E. *Semecarpus anacardium* L.f., F. *Shorea robusta* Gaertn.

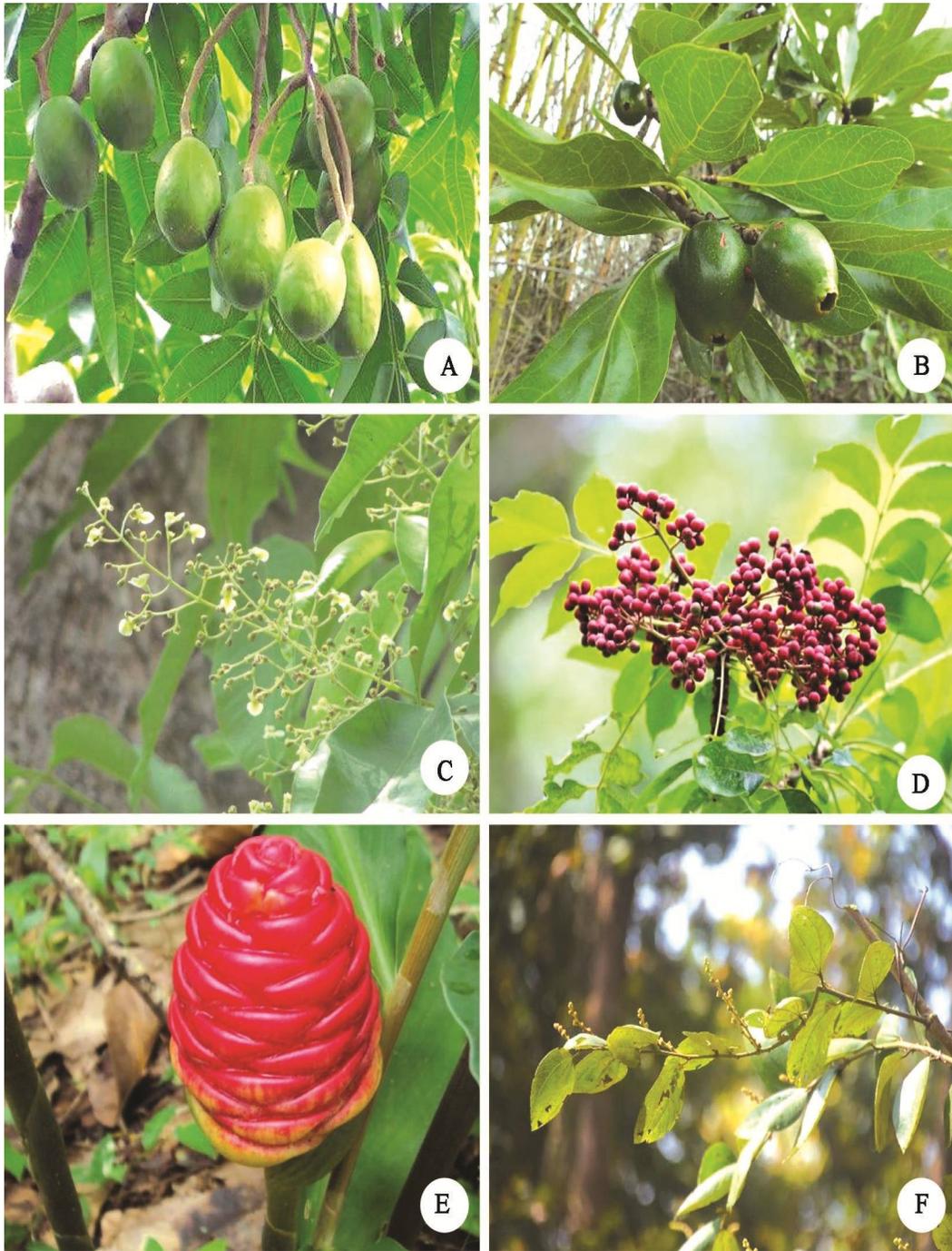


Plate 4. Photographs of some salient species of K&G NP. A. *Spondias pinnata* (L.f.) Kurz., B. *Tamilnadia uliginosa* (Retz.) Tirveng. & Sastre, C. *Vitex peduncularis* Wall. ex Schauer, D. *Zanthoxylum rhetsa* (Roxb.) DC., E. *Zingiber zerumbet* (L.) Roscoe ex Sm., F. *Ziziphus rugosa* Lamk.

Merremia umbellata (L.) Hallier f., Bot. Jahrb. 16: 552. 1893. *Convolvulus umbellatus* L. Climber, occasionally occurs in forest margins and in thickets. Fl. & fr.: February-May. Use: Leaves are eaten as vegetables. RS: KKI 4952 (DACB).

HYDROPHYLLACEAE R.Br.

Hydrolea zeylanica (L.) Vahl, Symb. Bot. 2: 46. 1791. *Nama zeylanica* L. BN: *Kasschara, Ishalanguli*. Herb, commonly occurs in moist places near ditches. Fl. & fr.: October-March. Use: Medicinally used in intestinal disorders also used as fodder. RS: KKI 4998, 3770 (DACB).

BORAGINACEAE A.Juss.

Cordia dichotoma Forst. f., Fl. Ins. Austr. Prodr. 18: 110. 1876. BN: *Bohal, Bohary, Bohari, Bahubara*. Deciduous tree, rarely occurs in scrub forests, and in open places. Fl. & fr.: February-August. Use: Fruits and kernel of seeds are eaten; kernel is used for ring-worm and also used as fire wood. RS: MAH 241 (DACB).

Heliotropium indicum L., Sp. Pl. 139. 1753. *Heliotropium foetidum* Salisb. BN: *Hatisura, Hatisura*. Herb, commonly occurs in open waste places, sides of ponds, and roadsides. Fl. & fr.: Throughout the year. Use: Leaf extract is used for eye diseases, applied locally to ulcers and sores. RS: KKI 5045, 3739 (DACB)

VERBENACEAE Saint.-Hilaire

Callicarpa arborea Roxb., Fl. Indica 1: 405. 1820. *Premna arborea* (Roxb.) Roth. BN: *Bormala, Khoja*. Evergreen tree, commonly occurs in hill slopes, scrub jungle, and forest edges. Fl. & fr.: May-November. Use: Leaf is used in stomachache. RS: KKI 5034 (DACB).

Clerodendrum indicum (L.) Kuntze, Revis. Gen. Pl. 2: 586. 1891. *Siphonanthus indicus* L. BN: *Bamunhatti, Bonchat*. Shrub, occasionally occurs in Fallow and waste lands along roadsides. Fl. & fr.: April-October. Use: Plant is used for medicinal and ornamental purposes. RS: KKI 5041 (DACB).

Clerodendrum infortunatum L., Sp. Pl. 637. 1753. *Clerodendrum viscosum* Vent. BN: *Bhat, Ghetuphul*. Shrub, very commonly occurs in throughout the forest areas. Fl. & fr.: January-July. Use: Plants is used in skin diseases, insect bites, scorpion sting and tumour. RS: KKI 4908 (DACB).

Duranta erecta L., Sp. Pl. 637. 1753. *Duranta repens* L. BN: *Kantamehedi*. Shrub, cultivated. Fl. & fr.: Throughout the year. Use: Planted as hedge and outdoor ornamental plant; wood is used for construction, making furniture and agricultural implements. RS: MAH 140 (DACB).

Gmelina arborea Roxb., Hort. Bengal. 46. 1814. *Gmelina sinuata* Link. BN: *Gamar, Gamari*. Deciduous tree, planted and naturalized. Fl. & fr.: February-July. Use: Plant is used as timber and leaves are used as fodder. RS: MAH 215 (DACB).

Tectona grandis L.f., Suppl. Pl. 151. 1782. *Theka grandis* (L.f.) Lam. BN: *Segun*. Deciduous tree, planted naturalized. Fl. & fr.: July-November. Use: Timber is much valued for all kinds of furniture, construction purposes and ship building; leaves yield an olive or yellow dye, suitable for dyeing silk. RS: MAH 226 (DACB).

Vitex peduncularis Wall. ex Schauer, Prodr. 11: 687. 1847. BN: *Baruna, Goda, Horina*. Deciduous tree, rarely occurs in most, sandy areas. Fl. & fr.: April-September. Use: Bark is used for making external application for pain in the chest. RS: KKI 3792 (DACB). **Plate 4C.**

LAMIACEAE Martinov

Anisomeles indica (L.) Kuntze, Rev. Gen.: 512. 1891. *Nepeta indica* L. BN: *Gobura, Shiprigach*. Herb, occasionally occurs near forest trails. Fl. & fr.: October-July. Use: Plant is used in the treatment of rheumatism. RS: KKI 5026 (DACB).

Hyptis suaveolens (L.) Poit., Ann. Mus. Hist. Nat. 7: 472. 1806. *Ballota suaveolens* L. BN: *Bilati tulsi, Tokma*. Shrub, occasionally occurs in dry thickets and open fields. Fl. & fr.: Throughout the year. Use: Plant is used in the treatment of stomach problems, fevers associated with colds. RS: KKI 5044 (DACB).

Leucas aspera (Willd.) Link, Enum. Hort. Berol. Alt. 2: 113. 1822. *Phlomis aspera* Willd. BN: *Shetodron, Dondokalosh*. Shrub, commonly occurs in dry sandy soil. Fl. & fr.: December-March. Use: Flowers are given to children with warm honey to cure cough and cold. RS: MAH 139 (DACB).

Pogostemon parviflorus Benth., Pl. Asiat. Rar. 1: 31. 1830. BN: *Nug-bui*. Herb, rarely occurs in forest beds and thickets. Fl. & fr.: March-June. Use: Plant is useful in the treatment of enteritis, eczema and mycotic enteritis. RS: KKI 3740 (DACB).

SCROPHULARIACEAE A.Juss.

Limnophila aromatica (Lamk.) Merr., Interpr. Herb. Amboin.: 466 (1917). BN: *Pani Karpur*. Herb, occasionally occurs in ditches and marshy places of the wet low-lying areas. Fl. & fr.: Throughout the year. Use: Medicinally used in fever. RS: KKI 3865 (DACB).

Limnophila indica (L.) Druce, Rep. Bot. Soc. Exch. Club Br. Isles 3: 420. 1914. BN: *Panikarpur*. Herb, commonly occurs in marshy and wet places. Fl. & fr.: February-October. Use: Plant is used in dysentery. RS: KKI 3840 (DACB).

Limnophila sessiliflora (Vahl) Blume, Bijdr.: 749. 1826. BN: *Bamon keshori*. Aquatic herb, occasionally occurs in swamps, rice fields, wet places and lowlands. Fl. & fr.: December-January. Use: Plant is suitable for improving the water quality of ponds by capturing floating mud particles. RS: KKI 4981 (DACB).

Lindernia anagallis (Burm. f.) Pennell, J. Arnold Arbor. 24: 252. 1943. BN: *Pani ghas*. Aquatic herb, occasionally occurs in paddy fields, banks of ponds and wet places. Fl. & fr.: March-November. Use: Plant is used as in gonorrhoea treatment. RS: KKI 4921 (DACB).

Lindernia antipoda (L.) Alston, Handb., Fl. Ceylon 6 (Suppl.): 214. 1931. *Ruellia antipoda* L. BN: *Jai ghas*. Herb, occasionally occurs in tanks and ponds, rice fields, and moist places. Fl. & fr.: Throughout the year. Use: Root juice is applied to cure diarrhoea. RS: MAH 133 (DACB).

Lindernia ciliata (Colsm.) Pennell, Brittonia 2: 182. 1936. BN: *Bhui*. Herb, occasionally occurs in rice fields, moist ground, and wet grasslands. Fl. & fr.: May-August. Use: Sap from the crushed leaves is given after childbirth. RS: KKI 3752 (DACB).

Lindernia elata (Benth.) Wettstein in Engler & Prantl, Nat. Pflanzenfam. 4: 79. 1891. BN: *Lamba chapra*. Herb, commonly occurs in paddy fields, grasslands, and moist places. Fl. & fr.: August-December. RS: KKI 4991 (DACB).

Lindernia procumbens (Krocker) Philcox, Taxon 14: 30. 1965. *Anagalloides procumbens* Krock. BN: *Bakpuspa*. Herb, occasionally occurs in Paddy fields, marshy places, and wet lowlands. Fl. & fr.: July-December. Use: Plant is used as in gonorrhoea treatment. RS: KKI 4978 (DACB).

Scoparia dulcis L., Sp. Pl. 116. 1753. *Ambulia micrantha* Raf. BN: *Bon dhone, Misridana*. Herb, occasionally occurs in waste places, beside trails, and along roadside. Fl. & fr.: Throughout the year. Use: Leaves are used to stop bleeding. RS: KKI 4905 (DACB).

OROBANCHACEAE Ventenat

Aeginetia indica L., Sp. Pl.: 632. 1753. BN: *Kakmasha*. Herb, occasionally occurs in moist and marshy places. Fl. & fr.: November-March. Use: Infusion of plant is use internally against diabetes. RS: MAH 105 (DACB).

ACANTHACEAE A.Juss.

Hygrophila ringens (L.) R.Br. ex Spreng., Syst. Veg. 2: 828. 1825. *Hygrophila salicifolia* (Vahl) Nees. BN: *Kakmasha*. Herb, occasionally occurs in moist and marshy places. Fl. & fr.: November-March. RS: KKI-3819 (DACB).

Justicia adhatoda L., Sp. Pl.: 15. 1753. *Adhatoda vasica* Nees. BN: *Sada Basak*. Shrub, occasionally occurs in *moist to dry slopes and disturbed areas*. Fl. & fr.: January-April. Use: Roots and leaves are used for treating bronchitis, asthma, fever and jaundice. RS: KKI 4986 (DACB).

Justicia gendarussa Burm.f., Fl. Indica 10. 1768. *Dicliptera rheedei* Kostel. BN: *Nilnishinda, Jagatmadam*. Shrub, commonly occurs in forest edges mainly fallow areas. Fl. & fr.: December-May. Use: Plant is used in the treatment of inflammatory disorders, asthma, and pathogenic infection. RS: MAH 220 (DACB).

Lepidagathis incurva Buch.-Ham. ex D.Don, Prodr. Fl. Nepal: 119. 1825. Herb, commonly occurs in moist damp areas. Fl. & fr.: March-May. Use: Plants is *used* to stop bleeding, ear infections and the treatment of anemia. RS: KKI 4950 (DACB).

Nelsonia canescens (Lam.) Spreng., Syst. Veg. 1: 42. 1824. BN: *Paramul*. Herb, commonly occurs in forest bed mainly in dry areas. Fl. & fr.: October-February. Use: Traditionally used for malaria, gout, cardiovascular and inflammatory diseases treatment. RS: KKI 4912 (DACB).

Phaulopsis imbricata (Forssk.) Sweet, Hort. Brit. ed. 1: 327. 1827. *Ruellia imbricata* Forssk. BN: *Kantashi*. Herb, occasionally occurs in waste places and fellow land. Fl. & fr.: December-March. Use: Plant is used as fodder. RS: KKI 4997 (DACB).

Ruellia tuberosa L., Sp. Pl. 635. 1753. BN: *Potpoti*. Herb, occasionally occurs in fallow land and moist areas. Fl. & fr.: almost throughout the year. Use leaves are used to treat toothache. RS: MAH 207 (DACB).

BIGNONIACEAE A.Juss.

Stereospermum tetragonum DC., Biblioth. Universelle Genève n.s. 17: 124. 1838. BN: *Dharmara, Pahari-awal, Atkapali*. Deciduous tree, rarely occurs in forest edges. Fl. & fr.: April-November. Use: Wood is used for making furniture, construction, and tea boxes. RS: KKI 3831 (DACB).

Oroxylum indicum (L.) Kurz, Forest Fl. Burma 2: 237. 1877. *Bignonia indica* L. BN: *Kanadingi, Sanapatha, Shona*. Deciduous tree, occasionally occurs in scrub forest and forest thickets. Fl. & fr.: June-March. Use: Plant is used in jaundice, gastric ulcers, tumors, diabetes, and diarrhoea. RS: MAH 91 (DACB).

SPHENOCLEACEAE Baskerville

Sphenoclea zeylanica Gaertn., Fruct. 1: 113. 1788. *Pongatium zeylanicum* (Gaertn.) Kuntze. BN: *Jhil marich*. Herb, occasionally occurs in damp ground and marshy places. Fl. & fr.: January-November. Use: Leaves are used to cure the ulcers. RS: KKI 3768 (DACB).

RUBIACEAE A.Juss.

Aidia densiflora (Wall.) Masam., *Sci. Rep. Kanazawa Univ.*, Biol. 4: 85. 1955. *Webera oppositifolia* Roxb. BN: *Haddigach, Lohamari*. Evergreen tree, rarely occurs in forest margin. Fl. & fr.: January-June. Use: Timber is used for house construction. RS: KKI 3764 (DACB).

Aidia pseudospicata Ridsdale, *Blumea* 41: 149. 1996. BN: *Aidakata*. Evergreen tree, occasionally occurs in forest ridges. Fl. & fr.: April-December. RS: KKI 5003 (DACB).

Canthium coromandelicum (Burm.f.) Alston, *Handb. Fl. Ceylon* 6(Suppl.): 152. 1931. BN: *Bishmain*. Shrub, rarely occurs in scrub forest. Fl. & fr.: June-August. Use: Plant is used for diabetes, fevers, diarrhea and constipation treatment. RS: KKI 3802 (DACB). **Plate 1D.**

Catunaregam spinosa (Thunb.) Tirveng, *Bull. Mus. Natl. Hist. Nat., Sér. 3, Bot.* 35: 13. 1978. *Canthium chinense* Pers. BN: *Mainkanta, Manphal*. Shrub, very commonly grows on plain land, forest beds and trails. Fl. & fr.: October-January. Use: Plant is used in ulcers, skin diseases, asthma, cough and bronchitis. RS: KKI 3816 (DACB). **Plate 1F.**

Gardenia coronaria Buch.-Ham., *Embassy Ava* 3: 307. 1809. *Gardenia costata* Roxb. BN: *Bela, Koinal, Botta*. Deciduous tree, rarely occurs in forest margins. Fl. & fr.: March-December. Use: Timber is used for making light furniture and also used as firewood. RS: KKI 3847 (DACB).

Haldina cordifolia (Roxb.) Ridsdale, *Blumea* 24: 361. 1978. BN: *Haldu, Kaika, Dakrum*. Deciduous tree, rarely occurs in swampy wetlands and dry loamy areas. Fl. & fr.: April-May. Use: Timber is used for making household articles and infusion of the roots is used in the treatment of diarrhoea and dysentery. RS: KKI 3806 (DACB).

Ixora cuneifolia Roxb., *Fl. Indica* 1: 380. 1820. *Ixora rosea* Wall. BN: *Beophul*. Shrub, occasionally occurs in forest beds. Fl. & fr.: March-July. Use: Plant has ornamental value. RS: MAH 103 (DACB).

Mitracarpus hirtus (L.) DC., *Prodr.* 4: 572. 1830. Herb, rarely occurs in open sunny lands. Fl. & fr.: September-March. Use: Medicinally used in ringworm, rashes, toothache, itch, eczema and venereal diseases treatment. RS: MAH 141 (DACB).

Mitragyna diversifolia (Wall. ex G.Don) Havil., *J. Linn. Soc.* 33: 71. 1897. *Stephegyne parvifolia* Korth. BN: *Phuti kadam*. Deciduous tree, commonly occurs in road sides and open places. Fl. & fr.: August-November. Use: Stems used for making furniture and also used as firewood. RS: KKI 3800 (DACB).

Mitragyna parvifolia (Roxb.) Korth., *Observ. Nacl. Indic.* 19. 1839. *Nauclea parvifolia* Roxb. BN: *Phuti kodom, Keli kadam*. Deciduous tree, occasionally occurs in dry forest areas. Fl. & fr.: November-January. Use: Wood is used for making various types of utensils and agricultural purposes. RS: KKI 5018 (DACB). **Plate 3C.**

Morinda umbellata L., *Sp. Pl.* 176. 1753. BN: *Gassa latha*. Climber, rarely occurs in slopy areas. Fl. & fr.: June-September. Use: Leaves and roots are used in dysentery. RS: KKI 4918 (DACB).

Neolamarckia cadamba (Roxb.) Bosser, *Bull. Mus. Natl. Hist. Nat., B, Adansonia* 6: 247. 1984. *Anthocephalus cadamba* (Roxb.) Miq. BN: *Kodom, Bul-kodom*. Evergreen tree, occasionally occurs in roadsides and forest edges. Fl. & fr.: July-November. Use: Plant is used for making planks, battens and tea boxes, also has fire wood value. RS: MAH 97 (DACB).

Oldenlandia corymbosa L., *Sp. Pl.* 1: 119. 1753. *Hedyotis corymbosa* (L.) Lam. BN: *Bhutitida*. Herb, occasionally occurs in waste lands, grass fields, and in scrub jungles. Fl. & fr.: Throughout the year. Use: Plant is used in jaundice fever and liver diseases. RS: MAH 132 (DACB).

Oldenlandia diffusa (Willd.) Roxb., *Hort. Bengal.* 11. 1814. *Hedyotis diffusa* Willd. Herb, commonly grows on moist humus covered clayey or sandy soils. Fl. & fr.: July-December. RS: KKI 3703 (DACB).

Spermacoce alata Aubl., Hist. Pl. Guiane 60. 1775. BN: *Ghuoijhil shak*. Herb, commonly occurs in open areas and scrub forests. Fl. & fr.: December-April. Use: Leaf is used for boil treatment. RS: KKI 3754 (DACB).

Spermacoce ocymoides Burm.f., Fl. Ind. 34. 1768. BN: *Arunpata*. Herb, occasionally occurs in roadsides and waste disturbed soil. Fl. & fr.: September-November. Use: Leaves sap is used to treat worms and ringworm. RS: KKI 3765 (DACB).

Tamilnadia uliginosa (Retz.) Tirveng. & Sastre, Mauritius Inst. Bull. 8(4): 85. 1979. BN: *Piralu*. Deciduous tree, occasionally occurs in forest margin along forest trails. Fl. & fr.: June-February. Use: Plant is used as a remedy in diarrhoea and dysentery. RS: MAH 93 (DACB). **Plate 4B.**

ASTERACEAE Martinov

Acmella calva (DC.) R.K. Jansen, Syst. Bot. Monogr. 8: 41. 1985. *Spilanthes calva* DC. BN: *Nag phul*, *Surjakannya*. Herb, occasionally occurs in open areas. Use: Roots are used in toothache. Fl. & fr.: Throughout the year. RS: KKI 4987 (DACB).

Acmella paniculata (Wall. ex DC.) R.K. Jansen, Syst. Bot. Monogr. 8: 67. 1985. *Spilanthes paniculata* Wall. ex DC. BN: *Nakphul*. Herb, occasionally occurs in open fields, wastelands, roadsides, and forest margins. Fl. & fr.: February-October. RS: MAH 178 (DACB).

Ageratum conyzoides L., Sp. Pl.: 839. 1753. BN: *Ochunti*, *Fulkuri*. Herb, occasionally occurs in open areas, and forest clearings. Fl. & fr.: November-June. Use: Leaf juice is used for curing wounds and cuts. RS: KKI 4937 (DACB).

Blumea lanceolaria (Roxb.) Druce, Bot. Soc. Exch. Club Br. Isles 4: 609. 1916. *Conyza lanceolaria* Roxb. BN: *Borotara*. Herb, commonly occurs in moist soils, scrub forests and near trails. Fl. & fr.: November-July. Use: Leaves are given in bronchitis and aphthae. RS: KKI 4982 (DACB).

Cyanthillium cinereum (L.) H. Rob., Proc. Biol. Soc. Wash. 103. 252. 1990. *Vernonia cinerea* (L.) Less. BN: *Kuksim*. Herb, occasionally occurs in dry exposed slopes, waste places, and open forests. Fl. & fr.: Throughout the year. Use: Fodder. RS: KKI 3749 (DACB).

Eclipta prostrata (L.) L., Mant. Pl. 1771. *Eclipta alba* (L.) Hassk. BN: *Kalokeshi*. Herb, commonly occurs in damp waste lands, hill slopes, and cultivated fields. Fl. & fr.: Throughout the year. Use: Plant is used for various chronic skin diseases, jaundice and fever. RS: KKI 4988 (DACB).

Grangea maderaspatana (L.) Poir., Encycl. [J. Lam. & al.] Suppl. 2. 825. 1812. Herb, rarely occurs in damp and waste places. Fl. & fr.: January-August. Use: Leaf-sap is used to treat earache. RS: KKI 5020 (DACB).

Sphagneticola trilobata (L.) Pruski, Mem. New York Bot. Gard. 78: 114. 1996. *Wedelia trilobata* (L.) Hitchc. Herb, commonly occurs in forest margins and open places. Fl. & fr.: March-August. Use: Plant is used for ulcer, sore throat, varicose, headache, fever, epilepsy, snakebite and wounds. RS: KKI 53695 (DACB).

Synedrella nodiflora (L.) Gaertn., Fruct. Sem. Pl. 2: 456. 1791. *Verbesina nodiflora* L. Herb, commonly occurs in Dry soil, near hedges, and exposed places. Fl. & fr.: Throughout the year. Use: Plant is used in headache and earache. RS: KKI 4995 (DACB).

Abbreviations: BN= Bengoli name; Fl. & fr.= Flowering and fruiting period; RS= Representative specimen.

Discussion

The present study has found that, the Kadigarh National Park represented by 271 species under 189 genera and 78 families. Out of 271 species Pteridophytes represented by 9 species under 9 genera and 6 families. In Angiosperms, Magnoliopsida (dicotyledons) represented by 208 species under 141 genera and 57 families whereas, Liliopsida (monocotyledons) represented by 53 species under 38 genera and 14 (Table 1). All species of Pteridophytes were found as wild but among the Angiosperms total 209 (80.08%) species were found wild, and 52 (19.92%) as planted or cultivated. *Platyclusus orientalis* (L.) Franco is the only gymnosperm species planted in the park area.

Table 1. Taxonomic enumeration of major plant group of the Kadigarh National Park.

Division	Numbers of family	Numbers of genus	Numbers of species
Pteridophyta	6	9	9
Gymnosperm	1	1	1
Liliopsida	14	38	53
Magnoliopsida	57	141	208
Total	78	189	271

The largest five families of the study area are (Fig. 2), viz. Fabaceae (16 genera, 20 species), Rubiaceae (13 genera, 18 species), Poaceae (14 genera, 16 species), Euphorbiaceae (10 genera, 15 species), and Cyperaceae (5 genera, 13 species). On the other hand, 25 families (viz. Annonaceae, Lygodiaceae, Dennstaedtiaceae, Athyriaceae, Sinopteridaceae, Cupressaceae, Eriocaulaceae, Bromeliaceae, Costaceae, Pontederiaceae, Smilacaceae, Piperaceae, Ulmaceae, Urticaceae, Bixaceae, Elaeocarpaceae, Bombacaceae, Capparaceae, Brassicaceae, Ebenaceae, Thymelaeaceae, Apiaceae, Hydrophyllaceae, Orobanchaceae, Sphenocleaceae) are represented each by a single species. The study also found, *Cyperus* is the largest genera with 6 species followed by *Ficus* and *Lindernia* with 5 species each and *Desmodium* with 4 species.

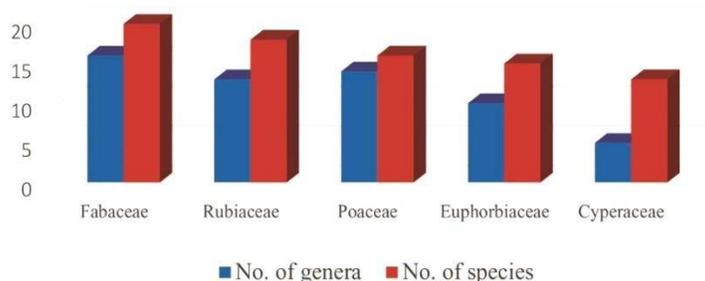


Fig. 2. Five largest angiosperm families of KgNP showing number of genera and species.

Status of occurrence has been assessed for proper conservation management and sustainable utilization of the natural resources of the forest. A total of 4 species (1.48%) are very common distributed in the forest, while 119 (43.91%) are found as common (including 52 planted species), 99 (36.53%) species as occasionally occurred, 49 (18.08 %) species as rare.

The flora of the park area has been categorized under four broad habit forms named trees, shrubs, herbs and climbers. Among those habit forms, 117 (43.17%) species fall under herbs, 85 (31.37%) species fall under trees, 49 (18.08%) species fall under shrubs, and 20 (7.38%) species fall under climbers. This analysis shows that, both tree and herbaceous groups are higher than other habit forms in the study area. On the other hand, out of 85 tree species 52.94 % (45 species) are deciduous while 47.06% (40 species) are evergreen.

In comparison to *Sal* forests of the country (Table 2), total vascular species of the KgNP (271 species under 189 genera and 78 families) is quite lower than 302 species reported from the Runtia *Sal* forest (Tutul *et al.* 2009, 2010 and Rahman *et al.* 2010) and quite greater than 222 species reported from Birganj National Park (Rahman *et al.* 2022), 174 species reported from Madhupur *Sal* forest (Malaker *et al.* 2010) and 84 species reported from Rajeshpur *Sal* forest (Choudhury *et al.* 2004).

Table 2. Floristic comparison among different *Sal* forests of the country

Name of the National Parks	Number of families	Number of genera	Number of species
Runtia <i>Sal</i> Forest	105	233	303
Kadigarh National Park	78	189	271
Birganj National Park	69	176	222
Madhupur <i>Sal</i> forest	54	131	174
Rajeshpur <i>Sal</i> forest	48	76	84

The present study has found over 150 medicinal plants used by the local peoples of the study area for their primary health care. They use the medicinal plants for treatment of several common diseases including, jaundice, diabetes, diarrhoea, asthma, fever, cold, ulcer, cough, abdominal pain, scabies, constipation, indigestion, dysentery, piles, rheumatic pain etc. Some of the important medicinal plants used by the local people are *Alstonia scholaris* (L.) R. Br., *Achyranthes aspera* L., *Calotropis gigantea* (L.) Dryand., *Centella asiatica* (L.) Urban, *Eclipta prostrata* (L.) L., *Justicia adhatoda* L., *Phyllanthus niruri* L., *Phyllanthus emblica* L., and *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn. Apart from medicinal uses, 26 species as vegetables, 22 species as timber, 19 species ornamental, 17 species as fodder, 15 species as fruits, 13 species as firewood, 12 species as wildlife supportive, and 18 species used for miscellaneous purposes.

This checklist provides basic information on all angiosperm species currently occurring in the Kadigarh National Park. Several factors like illegal felling, forest fire, firewood collection and other unsustainable resource utilization practices degrade the habitat in and around the forest. Furthermore, some organized encroachers are also noticed. Climate change mainly cyclone uprooted many of the tree species is an additional threat which may directly affect habitat and biodiversity. To address these challenges sustainable management plan for the protected area should be undertaken in the light of National Conservation Strategy, and proper implementation of the action plan is required with collaboration and cooperation of stakeholders and local administrations.

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