

A CHECKLIST OF THE VASCULAR FLORA OF MADHABKUNDO ECO-PARK, MOULVIBAZAR, BANGLADESH

KHANDAKAR KAMRUL ISLAM¹, MOHAMMAD AMDADUL HOQUE, NAIMUR RAHMAN,
MOHAMMAD ABDUL AWAL SARKER AND SARDER NASIR UDDIN

Bangladesh National Herbarium, Chiriakhana Road, Mirpur-1, Dhaka-1216, Bangladesh

Keywords: Checklist, Vascular flora, Madhabkundo Eco-park, Bangladesh.

Abstract

A checklist of the vascular flora of Madhabkundo Eco-park produced to determine the plant species diversity. Floral survey of the area was conducted between the years of 2009-2016 using walk-over method. The study revealed that the vascular plants in the area comprised of 212 species representing 84 families and 193 genera. Among them 37 species belong to Monocotyledons (Liliopsida), 172 species to Dicotyledons (Magnoliopsida) and 3 species belong to Pteridophytes. In terms of life form, 77 trees, 68 herbs, 46 shrubs and 21 climbers were recorded. The largest family is the Rubiaceae with 15 species followed by Euphorbiaceae with 11 species, Moraceae with 10 species, Urticaceae with 9 species and Rutaceae & Acanthaceae with 8 species each. Based on availability, 4 species are very common, 45 are common, 78 are occasional, 70 are rare and 15 are found under cultivation. The study has found five plant species occur only in the park area, which needs to be effectively conserved.

Introduction

Madhabkundo Eco-park is situated under Gouronagar mouza of Dakhinbag union at Baralekha upazila of Moulvibazar district in Bangladesh. It is a part of greater Juri forest range, lies between 24°30'- 24°32' N latitudes and 92°37'-91°39' E longitudes and about 70 km north of Moulvibazar district headquarter. The Eco-park covers about an area of 654.42 acres of land including about 265.68 acres of reserve forest for wildlife. It has been declared as Eco-park in 2001. The eco-park is built around Madhabkundo waterfall, the largest waterfall and the most attractive site of the country. Geologically this park is in the Patharia Structure and is composed of the rocks of the Bhuvan formation. The topography of the park area mainly of slopes & hillocks (locally called *tila*) running from North-South direction. Few water courses (locally called *chhara*) passes through and around the hillocks. The soils of the park are brown in color, sandy clay loam to clay loam of Upper Tertiary origin. Average temperature of the area varies from 12°C to 32°C and average annual precipitation is 390 cm (Ibrahim *et al.* 2012). Here, the canopy height varies from 10-30 m and categorically it is a semi-evergreen type of forest.

The Convention on Biological Diversity (CBD) is important with respect to the forestry sector. This has caused the declaration of many important sites and locations as 'protected areas' or 'eco-parks', 'national parks', etc. Eco-park is a recreational park established in any natural habitat that does not disturb or affect biodiversity or the community of that area. Being a signatory country to CBD, Bangladesh has already established nine eco-parks in the country and Madhabkundo is one of them. The park is an important tourist spot of the country with rich floral diversity. However, the floristic composition of the area is still unknown.

After the declaration of Eco-park, the Madhabkundo waterfall and surrounding biodiversity has widen a new facet of developing eco-tourism, biodiversity conservation and development of education and research in this area. A section of Khasia tribe lives in the forest villages of this area

¹Corresponding author: Email. orchidcu.islam@gmail.com

and is engaged in some agro-economic activities (mainly *pan jhum*/ betel leaf cultivation) in the forest land. Uddin *et al.*, (2015) described 4 plant species as new records for Bangladesh from the area. A number of floristic studies in Sylhet division have been done by several researchers over the last two decades *viz.* Alam (1988), Arefin *et al.* (2011), Haque *et al.* (2018), Hossain and Hossain (2016), Rahman *et al.* (2018), Uddin and Hassan (2010), Uddin *et al.* (2015), Uddin *et al.* (2002), Uddin *et al.* (2003), Uddin *et al.* (2011), Uddin and Hossain (2004), Sabuj and Rahman (2015), Rahman *et al.* (2018). However, none of them covers the floral composition of Madhabkundo Eco-park area. Therefore, as a part of regular activity, Bangladesh National Herbarium (BNH) has taken a program to conduct a systematic floristic study of the park area. The aim of this survey was to provide the first comprehensive and detailed checklist flora of the area to help in conservation and management of the Eco-park.

Materials and Methods

In order to investigate vascular flora of Madhabkundo Eco-park, a series of fieldworks have been conducted in different seasons during the years 2009 to 2016. General walk-over survey method (Filgueiras *et al.* 1994) was followed for collecting plant specimens with flowering and/or fruiting condition along with relevant field information and photographs. In the relevant field information, locality, date, habit, use and any other significant characteristics of each plant species were recorded. A total of 418 voucher plant specimens were collected for study and stored at BNH after following the standard herbarium processing techniques. Collected plant specimens were then critically studied, examined and identified at the BNH by using field notes, photographs taken during fieldwork and voucher herbarium specimens. Identification was then confirmed by experts; comparing with herbarium specimens deposited both at Bangladesh National Herbarium (DACB) and Dhaka University Salar Khan Herbarium (DUSH); consulting standard floras and literatures [*viz.*, Hooker (1872-1897), Prain (1903), Brandis (1906), Kurz (1877), Kanjilal *et al.* (1938), Alam (1988), Das and Alam (2001), Ahmed *et al.* (2007-2009), Wu *et al.*, (1995-2013), Uddin and Hasan (2018)] and clear type images available on the websites of different international herbaria.

In the taxonomic enumeration presented in the paper, Pteridophytes have been placed first followed by Magnoliopsida and Liliopsida. The families of Pteridophytes have been arranged according to the classification system of Kramer & Green (1990), whereas, the families of Magnoliopsida and Liliopsida have been arranged according to the classification system of Cronquist (1981). The genera and species under each family have been arranged alphabetically. Each taxon was furnished with valid name with original citation, basionym (if any), well-known synonym(s) (if any), local name(s) (if any), use(s) (if any), life form, habitat, state of occurrence and one representative specimen number collected from the study area. The plant species found in the study area has been classified into five categories based on the state of occurrence. 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. Field observation, group discussion with local people during field works and consulting literatures (i.e. Uddin 2006; Hasan *et al.* 2014; Pasha and Uddin 2019; Uddin *et al.* 2001; Yusuf *et al.* 2009) resulted in identifying economical and ecological use of plants. Local names of plant species have been collected mainly from people living in the surroundings of the study area by interrogating and also by consulting literatures (*viz.* Huq 1986, Huq 2019 & Pasha and Uddin 2013). Plant taxonomic circumscription and authorities for each species were incorporated as per ICBN and checked in the recent taxonomic publications [*viz.* Wu *et al.*, 1995-2013 the nomenclatural databases of IPNI, 2008; TROPICOS, 2010; The Plant List, 2013].

Results

The present checklist has identified following vascular plant species from the Madhabkundo Eco-park of Moulvibazar districts in Bangladesh.

PTERIDOPHYTES

PTERIDACEAE Ching.

Adiantum lunulatum Burm. f., Fl. Indica 235. 1768. *Adiantum philippense* L., Sp. Pl. 2: 1094. 1753. LN: *Biddapata*, *Kali-jhant*. Evergreen, perennial fern, commonly occurs on rocky soils, moist shady place on hill slope. Use: Medicine & Ornamental. RS: N-5342 (DACB).

Pteris ensiformis Burm. f., Fl. Indica 230. 1768. LN: *Ensiteris*. Evergreen, perennial fern, occasionally occurs in acidic soils, on forests bed, streamside. Use: Vegetable & Medicine. RS: N-5267 (DACB).

ANGIOPTERIDACEAE Fee ex Bonner.

Angiopteris evecta (G. Forst.) Franz Hoffm., Comm. Soc. Reg. Gott. 12: 29. 1796. *Polypodium evectum* G. Forst., Commentat. Soc. Regiae Sci. Gott. 12: 29, t. 5, 29. 1794. LN: *Raj Dhekia*. Evergreen, perennial fern; occasionally occurs in wet places near streams. Use: Medicine. RS: N-5277 (DACB).

MAGNOLIOPSIDA

ANNONACEAE A.Juss.

Alphonsea lutea (Roxb.) Hook.f. & Thomson, Fl. Ind. 1: 153. 1855. *Uvaria lutea* Roxb., Pl. Coromandel 1: pl. 36. 1795. LN: *Fonseti*. Evergreen trees, rarely occurs in the plain areas. Fl. & fr.: April-June. Use: Wood is a good timber, used as poles. Fruit pulp is edible. RS: N-5257 (DACB).

Goniothalamus sesquipedalis (Wall.) Hook.f. & Thomson, Fl. Ind. 1: 108. 1855. *Guatteria sesquipedalis* Wall., Pl. Asiat. Rar. 3: t. 266. 1832. LN: *Gonothal*. Evergreen shrubs, occasionally occurs in shady places along with streams. Fl. & fr.: November-January. Use: Medicine for antimicrobial and antioxidant activity. RS: N-5286 (DACB).

Polyalthia simiarum (Buch.-Ham. ex Hook.f. & Thomson) Benth. ex Hook.f. & Thomson, Fl. Brit. India 1(1): 63. 1872. *Guatteria simiarum* Buch.-Ham. ex Hook.f. & Thomson, Fl. Ind. 1: 142. 1855. LN: *Arjan*. Evergreen to semi evergreen trees, occasionally occurs in hill slopes. Fl. & fr.: April-September. Use: Bark fibers are made into ropes. Wood is used to make tea boxes. RS: N-5264 (DACB).

LAURACEAE A.Juss.

Actinodaphne obovata (Nees) Blume, Mus. Bot. 1: 342. 1851. *Tetradenia obovata* Nees, Pl. Asiat. Rar. 2: 64. 1831. LN: *Kola pata*. Evergreen trees, rarely occurs in hill slopes, streamside and in moist, shady areas. Use: Seeds are used for oil. Bark is used medicinally to treat fractures. Fl. & fr.: March-August. RS: N-5263 (DACB).

Neolitsea zeylanica (Nees) Merr., Philipp. J. Sci. 1 (Suppl. 1): 57. 1906. *Litsea zeylanica* Nees & T. Nees, Cinnam. Disp. [Amoen. Bot. Bonn. Fasc. 1:] 58. 1823. LN: *Saya Nayachita*. Evergreen trees, rarely occurs in deep forest. Fl. & fr.: October-April. Use: Root is used for house building. RS: KKI-641 (DACB).

CHLORANTHACEAE R.Br.

Chloranthus elatior Link, Enum. Hort. Berol. Alt. 1: 140. 1821. *Chloranthus erectus* (Buch.-Ham.) Verdc., Kew Bull. 40: 217. 1985. Evergreen shrubs, occasionally occurs in shady and moist places on hill slopes. Fl. & fr.: Throughout the year. Use: Medicine & Ornamental. RS: N-5245 (DACB). **Fig. 6.**

PIPERACEAE Giseke

Piper mullesua Buch.-Ham. *ex* D. Don, Prodr. Fl. Nepal. 20. 1825. Evergreen climbers, rarely occurs in forested slopes along trails. Fl. & fr.: April-October. Use: Flowers added to curries as a flavoring agent. Juice of the fruit is used to treat coughs and colds. RS: N-4845 (DACB).

Piper peepuloides Roxb., Fl. Ind. 1: 159. 1820. LN: *Pipal*. Evergreen climbers, occasionally occurs in shady and moist areas. Fl. & fr.: July-December. Use: Dried leaves are made into a paste with water and consumed to get relief from fever. RS: KKI-249 (DACB).

Piper sylvaticum Roxb., Fl. Ind., ed. 1820, 1: 158. 1820. LN: *Bon Pan, Pahari Pipal*. Evergreen shrubs, rarely occurs in moist, shady and wet areas. Fl. & fr.: May-September. Use: Leaves used as vegetables. Root has medicinal value. RS: N-5316 (DACB). **Fig. 21.**

ARISTOLOCHIACEAE A.Juss.

Aristolochia tagala Cham., Linnaea 7: 207. 1832. *Aristolochia roxburghiana* Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin 1859: 596. 1859. LN: *Iswaramul*. Evergreen climbers, commonly occurs in hill slopes, in thickets and in forest edges. Fl. & fr.: April-January. Use: Leaves apply to the head to treat fever. RS: KKI-234 (DACB).

MENISPERMACEAE A.Juss.

Cissampelos pareira L., Sp. Pl. 1031. 1753. *Cissampelos pareira* var. *hirsuta* (Buch.-Ham. *ex* DC.) Forman, Kew Bull. 22: 356. 1968. LN: *Memuka, Tubaki-lata*. Evergreen climbers, occasionally occurs on thickets, thatching fences or climbing over bushes. Fl. & fr.: February-July. Use: Roots are used for snakebite and scorpion sting. RS: N-5550 (DACB).

Parabaena sagittata Miers *ex* Hook.f. & Thom., Fl. Indica 1: 181. 1855. LN: *Samanuia*. Evergreen climbers, occasionally occurs in forest margins and in scrub. Fl. & fr.: January-November. Use: Stem and leaves decoction is used as medicine for treating jaundice and indigestion. RS: KKI-232 (DACB).

Stephania glabra (Roxb.) Miers, Ann. Mag. Nat. Hist., ser. 3 18: 14. 1866. *Cissampelos glabra* Roxb., Fl. Ind. ed. 1832, 3: 840. 1832. LN: *Thanda manik*. Evergreen climbers, occasionally occurs in moist shady places near streams. Fl. & fr.: May-August. Use: Root is used in the treatment of pulmonary tuberculosis, asthma, abdominal pains and dysentery. RS: KKI-256 (DACB).

Stephania japonica (Thunb.) Miers, Ann. Mag. Nat. Hist. 18: 14. 1866. *Menispermum japonicum* Thunb., Syst. Veg. 892. 1784. LN: *Nimukha*. Evergreen climbers, commonly occurs in forests openings and margins. Fl. & fr.: Throughout the year. Use: Root is used in the treatment of diarrhea, dysentery, fevers, stomach and urinary diseases. RS: KKI-254 (DACB).

SABIACEAE Blume

Meliosma pinnata (Roxb.) Maxim., Bull. Acad. Imp. Sci. Saint-Petersbourg 12: 64. 1868. *Millingtonia pinnata* Roxb., Fl. Ind., ed. 1820, 1: 103. 1820. LN: *Bativa*. Evergreen trees, occasionally occurs in hill slopes & foot hills. Fl. & fr.: September-April. Use: Leaves and fruits are edible. Wood is used for house building. RS: N-5300 (DACB).

MORACEAE Trinius

Artocarpus heterophyllus Lam., Encycl. 3: 29. 1789. *Artocarpus philippensis* Lam. Encycl. 3: 210. 1789. LN: *Kathal*. Evergreen trees, usually cultivated. Fl. & fr.: February-July. Use: Ripe fruit is edible. Young fruits and seeds are used as vegetables. RS: N-5551 (DACB).

Ficus auriculata Lour., Fl. Cochinch. 666. 1790. *Ficus roxburghii* Steud., Nomencl. Bot. 1: 637. 1840. LN: *Urbul*, *Sapai*. Evergreen trees, occasionally occurs in moist areas near streams and on hill slopes. Fl. & fr.: September-February. Use: Fruit is edible. Bark is used to make rope. RS: N-5557 (DACB).

Ficus fistulosa Reinw. ex Blume, Bijdr. 470. 1825. LN: *Fapa-dumur*. Evergreen trees, rarely occurs in hillsides and ridges with sandy to clay soils. Fl. & fr.: May-August. Use: Root is used for post-natal treatment. RS: N-5294 (DACB).

Ficus hederacea Roxb., Fl. Ind. 3: 538. 1832. *Ficus fruticosa* Roxb., Fl. Ind. 3: 533. 1832. LN: *Dumur*, *Parkath*. Evergreen shrubs, rarely occurs in forest thickets and hill slopes. Fl. & fr.: May-September. Use: Firewood. RS: N-5547 (DACB). **Fig. 13.**

Ficus heterophylla L.f., Suppl. Pl. 442. 1782. LN: *Balalata*, *Ghoti-sheora*. Evergreen shrubs, occasionally occurs in marshy areas, hill slopes along streams. Fl. & fr.: November-February. Use: Fruit is eaten as vegetable. Leaf juice is used in dysentery. RS: N-5574 (DACB).

Ficus hispida L.f., Suppl. Pl. 442. 1782. LN: *Dumur*, *Kakdumur*. Evergreen trees, commonly occurs in open places along the base of foothills and in swamp forest areas. Fl. & fr.: April-September. Use: Juice of the root is used in the treatment of fevers. RS: N-5580 (DACB).

Ficus nervosa B. Heyne ex Roth, Nov. Pl. Sp. 388. 1821. *Ficus undulata* Buch.-Ham., Trans. Linn. Soc. London 15: 133. 1827. LN: *Panidumur*. Evergreen trees, commonly occurs in deep forest areas and foot hills. Fl. & fr.: October-April. Use: Firewood. RS: N-5308 (DACB).

Ficus semicordata Buch.-Ham. ex Sm., Cycl. 14: 71. 1810. LN: *Lata dumur*. Evergreen trees, occasionally occurs in forest margins, along trails of hill slope and near streams. Fl. & fr.: June-December. Use: Bark and fruit is used for remedy of leprosy. RS: N-5534 (DACB).

Ficus variegata Blume, Bijdr.: 459. 1825. LN: *Rangila dumur*. Evergreen trees, occasionally occurs in scrub forests and moist hilly areas near streams. Fl. & fr.: December-March. Use: Wildlife supporting & firewood. RS: N-5279 (DACB).

Streblus asper Lour., Fl. Cochinch. 2: 615. 1790. LN: *Sheora*, *Herbon*. Evergreen trees, occasionally occurs in open places, lowland areas and in thickets. Fl. & fr.: February-June. Use: Bark is used for treatment of dysentery and fever. RS: KKI-616 (DACB).

CECROPIACEAE Berg.

Poikilospermum suaveolens (Blume) Merr., Contr. Arnold Arbor. 8: 47. 1934. *Conocephalus suaveolens* Blume, Hook.f., Fl. Brit. India 5: 545. 1888. LN: *Dolia sat*, *Kom lata*. Evergreen, woody climbers, rarely occurs in shady and moist places near streams. Fl. & fr.: April-June. Use: Ornamental. RS: KKI-597 (DACB)

URTICACEAE A.Juss.

Boehmaria glomerulifera Miq. in Zoll., Syst. Verz. Ind., Archip.: 101. 1854. *Boehmaria malabarica* Wedd., Hook.f., Fl. Brit. India 5: 575. 1888. LN: *Bortherthuri*. Deciduous trees, commonly occurs in moist and shady places. Fl. & fr.: December-March. Use: Rope is made from blast fibre of the plant. RS: KKI-275 (DACB).

Elatostema clarkei Hook.f., Fl. Brit. Ind. 5: 569. 1888. LN: *Clarkejhara*. Evergreen perennial herbs, commonly occurs in foot hills, on wet and shady rocks, along streams. Fl. & fr.: Throughout the year. Use: Indoor plant. RS: N-4847 (DACB).

Elatostema integrifolium (D. Don) Wedd., Prodr. 16(1): 179. 1869. *Procris integrifolia*, D. Don, Prodr. Fl. Nepal. 61. 1825. Perennial herbs, occasionally occurs in hill slopes along stream sides. Fl. & fr.: March-May. RS: N-5260 (DACB).

Elatostema procridioides Wedd., Prodr. 16(1): 180. 1869. Evergreen perennial herbs, occasionally occurs in forest beds along streams sides. Fl. & fr.: January-April. RS: N-5259 (DACB).

Elatostema rupestre (Buch.-Ham. ex D. Don) Wedd., Arch. Mus. Hist. Nat. 9: 304. 1856. *Procris rupestris* Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 60. 1825. Perennial herbs, rarely occurs in hill slopes. Fl. & fr.: May- July. RS: KKI-263 (DACB).

Neodistemon indicum (Wedd.) Babu & Henry, Taxon 19: 651. 1970. *Distemon indicum* Wedd., Monogr. Fam. Urtic. 551. 1856. LN: *Neodi*. Evergreen perennial herbs, very rarely grows in rocky places under shade. Fl. & fr.: August-October. RS: KKI-383 (DACB).

Oreocnide integrifolia (Gaudich.) Miq., Ann. Mus. Bot. Lugduno-Batavi 4: 306. 1869. *Villebrunea integrifolia* Gaudich., Voy. Bonite, Bot., Pl. 91. 1847. LN: *Ban katkora*, *Horhuta*. Evergreen trees, commonly occurs in wet places, hill slopes along streams. Use: Ropes, nets, fishing lines are made from the blast fiber of the plants. RS: KKI-656 (DACB).

Pilea melastomoides (Poir.) Wedd., Ann. Sci. Nat., Bot., sér. 4. 1: 186. 1854. *Urtica melastomoides* Poir., Encycl. Suppl. 4(1): 223. 1816. LN: *Malamarichha*. Evergreen perennial herbs, occasionally occurs in shady and wet places along streams. Fl. & fr.: August-November. RS: N-5553 (DACB).

Sarcochlamys pulcherrima Gaudich., Voy. Bot. 89. 1826. *Urtica pulcherrima* Roxb., Fl. Ind., ed. 1832 3: 588. 1832. LN: *Maricha*. Evergreen shrubs, occasionally occurs in open and damp forest areas near water courses. Fl. & fr.: June-February. Use: Stem fiber is used for making rope. RS: KKI-240 (DACB).

POLYGONACEAE A. Juss.

Ampelgynonum chinense (L.) Lindl., Edwards's Bot. Reg. 24(Misc.): 62. 1838. *Polygonum chinense* L., Sp. Pl. 1: 363. 1753. LN: *Mohicharansak*. Evergreen, perennial herbs, occasionally occurs in forest borders, open forest and damp marshy areas. Fl. & fr.: September-March. Use: Stem and leaf is used as vegetables. Boiled leaf is use in wounds. RS: KKI-280 (DACB).

Polygonum viscosum Buch.-Ham. ex D. Don, Prodr. Fl. Nepal. 71. 1825. *Persicaria viscosa* (Buch.-Ham. ex D. Don) H. Gross ex Nakai, Rep. Veg. Quelp. 42. 1914. LN: *Athalo Bishkatali*. Annual herbs, occasionally occurs in moist lowland areas near water courses. Fl. & fr.: February-May. RS: KKI-162 (DACB).

DIPTEROCARPACEAE Blume

Vatica lanceifolia (Roxb.) Blume, Mus. Bot. 2: 31. 1856. *Vateria lanceifolia* Roxb. Fl. Ind. 2: 601. 1824. LN: *Lashya garjan*. Evergreen trees, rarely occurs in moist swamp areas and near streams. Fl. & fr.: May-August. Use: Timber. RS: N-5544 (DACB).

THEACEAE D. Don

Camellia sinensis (L.) Kuntze, Trudy Imp. St.-Peterburgsk. Bot. Sada 10: 195. 1887. *Thea sinensis* L., Sp. Pl. 515. 1753. LN: *Cha*, *Cha gach*. Evergreen trees, cultivated. Fl. & fr.:

June-January. Use: Stimulating drink is prepared from leaves. Useful against diabetes, inflammation, vomiting, diarrhea, cardiac ailments. RS: KKI-418 (DACB).

ACTINIDIACEAE Hutchinson.

Saurauia roxburghii Wall., Pl. Asiat. Rar. 2: 40. 1831. LN: *Bhola kadam*, *Dalup*. Evergreen trees, commonly occurs in forest edges along streams. Fl. & fr.: March-October. Use: Fruits are edible, Fodder & Firewood. RS: N-5268 (DACB).

CLUSIACEAE Lindl.

Garcinia celebica L., Herb. Amb. 7. 1754. *Garcinia speciosa* Wall. Pl. Asiat. Rar. 3: 37. 1832. LN: *Specikau*. Evergreen trees, very rarely occurs in scrub forests along with water courses. Fl. & fr.: January-July. Use: Wood is suitable for house and bridge posts; Firewood. RS: KKI-621 (DACB). **Fig. 14.**

Calophyllum inophyllum L., Sp. Pl. 513. 1753. LN: *Kath Champa*, *Sultan Champa*. Evergreen trees, occasionally occurs sandy and rocky areas. Fl. & fr.: April-October. Use: Timber, dye, oil and medicine. RS: KKI-598 (DACB).

ELAEOCARPUACEAE DC.

Elaeocarpus aristatus Roxb., Fl. Ind. 2. 599. 1832. LN: *Chham Nangal*. Evergreen trees, rarely occurs in swamp areas near water bodies. Fl. & fr.: April-October. Use: Timber is used for light construction. RS: KKI-599 (DACB).

Elaeocarpus floribundus Blume, Bijdr.: 120. 1825. LN: *Jalpai*, *Titpai*. Evergreen trees, occasionally occurs in foot hills and in lowland areas near streams. Fl. & fr.: March-December. Use: Fruit is edible and also used in pickles. Infusion of bark and leaves is taken as tonic. RS: N-5280 (DACB).

Elaeocarpus tectorius (Lour.) Poir., Encycl. Suppl. 2: 704. 1812. *Craspedum tectorium* Lour. Fl. Cochinch. 336. 1790. *Elaeocarpus robustus* Roxb., Fl. Ind. ed. 2: 597. 1832. LN: *Jalpai*, *Chekio*. Evergreen trees, commonly occurs in scrub forests along trail. Fl. & fr.: May-October. Use: Medicine & Timber. RS: N-5227 (DACB).

TILIACEAE A.Juss.

Grewia nervosa (Lour.) Panigrahi, Taxon 34: 702. 1985. *Fallopia nervosa* Lour., Fl. Cochinch. 336. 1790. *Microcos paniculata* L., Sp. Pl. 514. 1753. LN: *Asar*, *Patka*, *Pichandi*. Deciduous trees, occasionally occurs in forests thickets. Fl. & fr.: March-December. Use: Ripe fruit is edible. Plant is used in the treatment of digestive disorders, itch, small pox and dysentery. RS: KKI-228 (DACB).

Grewia serrulata DC., Prodr. 1: 510. 1824. LN: *Panicherra*, *Pichandi*. Evergreen shrubs, occasionally occurs in moist areas, scrub jungles and forest edges. Fl. & fr.: May-February. Use: Leaves are used as fodder. Bark yields good fiber. RS: KKI-391 (DACB).

STERCULIACEAE Vent.

Sterculia hamiltonii (Kuntze) Adelb., Blumea 5: 506. 1952. *Clompanus hamiltonii* Kuntze, Revis. Gen. Pl. 1: 77. 1891. LN: *Siduriphal gach*. Evergreen trees, commonly occurs in hill slopes around waterfalls. Fl. & fr.: April-October. Use: House post & Firewood. RS: KKI-598 (DACB).

MALVACEAE A.Juss.

Abelmoschus moschatus Medik., Malvenfam. 46. 1787. *Abelmoschus chinensis* Wall., Numer. List 87. 1829. Herb. LN: *Mushak-dana*, *Kalokasturi*. Evergreen annual or perennial herbs, rarely

occurs in forest edges, scrubs and hill slopes near streams. Fl. & fr.: July-January. Use: Young leaves are used as vegetables. Paste of the bark is applied to wounds. RS: N-4832 (DACB).

Sida rhombifolia L., Sp. Pl. 684. 1753. *Malva rhombifolia* (L.) E.H.L.Krause, Fl. ed. 2, 6: 238. 1902. LN: *Lal Berela, Kureta*. Evergreen, perennial herbs, commonly occurs in scrubs, open slopes and near streams. Fl. & fr.: July-December. Use: Plant is used in the treatment of pulmonary tuberculosis. RS: KKI-627 (DACB).

Urena lobata L., Sp. Pl. 692. 1753. *Urena americana* L., Pl. Surin. 11. 1775. LN: *Congopat, Bankhra*. Evergreen annual or perennial shrubs, commonly occurs in forest edges, marshy places near streams and in hill slopes. Fl. & fr.: Throughout the year. Use: Fine fiber yields from stem. Root is used for bowel complaints. RS: KKI-384 (DACB).

FLACOURTIACEAE DC.

Flacourtia jangomas (Lour.) Raeusch., Nomencl. Bot. ed. 3: 290. 1797. *Stigmarota jangomas* Lour., Fl. Cochinch. 2: 634. 1790. LN: *Paniala, Lukluki*. Evergreen trees, occasionally occurs in forest beds and in edges. Fl. & fr.: March-October. Use: Ripen fruit is edible. Leaves and roots are used against diarrhea. RS: N-5541 (DACB).

ANCISTROCLADACEAE Walpers

Ancistrocladus tectorius (Lour.) Merr., Lingnan Sci. J. 6: 329. 1928. publ. 1930. *Bembix tectoria* Lour., Fl. Cochinch. 346. 1790. Evergreen shrubs, very rarely occurs in valleys and on slopes. Fl. & fr.: April-June. Use: Having Medicinal property. Young leaves are used as a flavoring agent. RS: N-5252 (DACB).

PASSIFLORACEAE A.Juss.

Passiflora foetida L., Sp. Pl. 959. 1753. *Passiflora polyadena* Vell., Fl. Flumin. 9: 1827. LN: *Gorakphal, Jhumkolata*. Evergreen climbers, commonly occurs in thickets under sunny areas and near water courses. Fl. & fr.: April-August. Use: Pulp of the ripe fruit is eaten raw. Dried leaves are used in tea as medicine. RS: KKI-229 (DACB). **Fig. 18.**

CUCURBITACEAE A.Juss.

Thladiantha cordifolia (Blume) Cogn. in A. DC., Monog. Phan. 3: 424. 1881. *Luffa cordifolia* Blume, Bijdr. 929. 1826. LN: *Paranga ludi*. Perennial climbers, occasionally occurs in shady areas near stream sides. Fl. & fr.: May-November. RS: KKI-651 (DACB).

Trichosanthes tricuspidata Lour., Fl. Cochinch. 2: 589. 1790. *Trichosanthes puber* Blume, Bijdr. Fl. Ned. India 15: 936. 1826. LN: *Makal phol*. Evergreen climbers, commonly occurs in hill slopes, in thickets and in wet areas along streams. Fl. & fr.: July-December. Use: Wild life supportive & medicinal plant. RS: N-5554 (DACB).

BEGONIACEAE Agard

Begonia annulata K. Koch, Berliner Allg. Gartenzeitung 1: 76. 1837. *Begonia barbata* Wall. ex A.DC., Prodr. 15(1): 348. 1864. LN: *Begonia*. Evergreen, perennial herbs, occasionally occurs in shady places near stream. Fl. & fr.: June-March. Use: Having ornamental value. Leaves are used as vegetables. RS: N-4835 (DACB).

CAPPARACEAE A.Juss.

Stixis suaveolens (Roxb.) Pierre, Bull. Mens. Soc. Linn. Paris 1: 654. 1887. *Roydsia suaveolens* Roxb., Pl. Coromandel 3: 87. 1819. LN: *Madhu-maloti*. Evergreen woody climbers,

commonly occurs in scrub forests and in thickets. Fl. & fr.: Throughout the year. Use: Fruit is edible. RS: N-5314 (DACB).

MORINGACEAE Dumortier

Moringa oleifera Lam., Encycl. 1(2): 398. 1785. LN: *Sajna*. Deciduous trees, cultivated. Fl. & fr.: October-March. Use: Leaves and fruits are use as vegetables. Roots and barks are used for cardiac and circulatory problems. RS: N-5568 (DACB).

EBENACEAE Gürke

Diospyros cordata (Hiern) Bakh., Gard. Bull. Straits Settlem. 7: 167. 1933. *Maba cordata* Hiern, Trans. Cambridge Philos. Soc. 12: 141. 1873. Deciduous trees, very rarely occurs in moist places near chhara. Fl. & fr.: August-December. Use: Wildlife supportive & medicinal plant. RS: N-4834 (DACB).

Diospyros montana Roxb., Pl. Coromandel 1: 37. 1795. LN: *Bon Gab, Tamal*. Deciduous trees, commonly occurs in scrub forests along trail. Fl. & fr.: March-May. Use: Medicine. Wood is suitable for house-post and furniture. RS: KKI-617 (DACB).

Diospyros ramiflora Roxb., Fl. Ind. ed. 1832, 2: 535. 1832. LN: *Urigab*. Deciduous trees, very rarely occurs in hill slopes and in thickets. Fl. & fr.: March-October. Use: Edible fruit is wildlife supportive. RS: KKI-288 (DACB).

MYRSINACEAE R.Br.

Ardisia khasiana C.B. Clarke, Fl. Brit. India 3: 527. 1882. LN: *Khairavao*. Evergreen shrubs, commonly occurs in open areas and margins of the forest. Fl. & fr.: June-February. RS: N-4849 (DACB). **Fig. 3.**

Embelia ribes Burm.f., Fl. Ind. 62. 1768. *Ardisia tenuiflora* Blume, Bijdr. 686. 1826. LN: *Biranga*. Evergreen shrubs, rarely occurs in moist areas of the forest along streams. Fl. & fr.: March-July. Use: leaves & shoots are eaten as vegetables. Fruit is wildlife supportive. RS: N-4844 (DACB). **Fig. 12.**

Maesa indica (Roxb.) A. DC., Trans. Linn. Soc. London Bot. 17: 134. 1834. *Baeobotrys indica* Roxb., Fl. Ind. 2: 230. 1824. LN: *Sesu, Sirkhi*. Evergreen trees, commonly occurs in forest margins and in thickets. Fl. & fr.: April-January. Use: Firewood. Root and fruit has medicinal properties. RS: KKI-602 (DACB).

MIMOSACEAE R.Br.

Acacia caesia (L.) Willd., Sp. Pl. 4(2): 1090. 1806. *Mimosa caesia* L., Sp. Pl. 1: 522. 1753. LN: *Aailai*. Evergreen shrubs, occasionally occurs in scrub forests along streams. Fl. & fr.: April-February. Use: Firewood. Bark is used in hair treatment. RS: N-5255 (DACB).

Albizia chinensis (Osbeck) Merr., Amer. J. Bot. 3(10) 575. 1916. *Mimosa chinensis* Osbeck, Dagb. Ostind. Resa 233. 1757. LN: *Chakua Koroi*. Deciduous trees, occasionally occurs in forests and open field mainly humid areas. Fl. & fr.: April-October. Use: Timber is used for making light furniture, firewood and also suitable for paper pulp. RS: N-5302 (DACB).

Archidendron clypearia (Jack) I.C. Nielsen, Adans. Ser. 2, 19: 15. 1979. *Inga clypearia* Jack, Malayan Misc. 2(7): 78. 1822. LN: *Kuramara*. Evergreen trees, occasionally occurs in swamp areas and in sandy soil areas. Fl. & fr.: February-April. Use: Timber is used for light construction, furniture and cabinet work, knife handles, boxes, coffins. RS: KKI-403 (DACB).

Calliandra umbrosa (Wall.) Benth., Trans. Linn. Soc. 30: 537. 1875. *Inga umbrosa* Wall. 1831. LN: *Chotto Betmara*. Deciduous trees, rarely occurs in foothills and in thickets. Fl. & fr.: June-February. Use: Firewood. RS: KKI-411 (DACB).

CAESLAPINIACEAE R.Br.

Saraca asoca (Roxb.) De Wilde, Blumea 15: 393. 1968. *Jonesia asoca* Roxb., Asiat. Res, 4: 355. 1795. LN: *Ashok*. Evergreen trees, commonly occurs in lowland moist areas. Fl. & fr.: February-September. Use: Timber is used for house building purposes. Bark is used in uterine complication. RS: N-5241 (DACB).

Loeseneriella africana (Willd.) R.Wilczek, in Fl. Congo Belge 9: 154. 1960. *Tonsella africana* Willd., Sp. Pl. 1: 194. 1797. Evergreen shrubs, rarely occurs in dry or damp forest areas, fringing forest or on rocky grounds. Fl. & fr.: July-September Use: Stem is used for roof construction. Infusion of dried leaves is drunk as a remedy for colds. RS: N-5532 (DACB).

FABACEAE Lindl.

Abrus precatorius L., Syst. Nat. ed. 12, 2: 472. 1767. LN: *Kunch, Ratti*. Evergreen perennial climbers, commonly occurs trailing over thickets and hedges in open or shady places. Fl. & fr.: July-September. Use: Tender young leaves are used as vegetables. Roots are used to treat digestive disorders. RS: KKI-257 (DACB).

Crotalaria verrucosa L., Sp. Pl. 2: 715. 1753. LN: *Bansan, Jhanjhana*. Evergreen annual to perennial herbs, rarely occurs in fallow areas and on marshy ground, along streams. Fl. & fr.: May-December. Use: Roots are used as a treatment against fever and stomach pains. RS: KKI-414 (DACB).

Derris elliptica (Wall.) Benth., Journ. Linn. Soc. Suppl. 4: 111. 1860. *Pongamia elliptica* Wall., Pl. Asiat. Rar. 3, 20: 237. 1832. LN: *Tabamul*. Evergreen shrubs, occasionally occurs in forest edges and in littoral areas. Fl. & fr.: March-June. Use: Roots are insecticidal, used as fish poisons. RS: N-5540 (DACB).

Derris monticola Prain, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 361. 1897. LN: *Montilata*. Evergreen perennial climbers, rarely occurs in hill slopes and in thickets. Fl. & fr.: March-May. Use: Firewood. RS: N-4830 (DACB).

Desmodium heterocarpon (L.) DC., Prodr. 2: 337. 1825. *Hedysarum heterocarpon* L., Sp. Pl. 2: 747. 1753. LN: *Karpo modi, Koo-shey-dung*. Evergreen perennial shrubs, commonly occurs in grassy slopes, watersides and in thickets. Fl. & fr.: March-July. Use: Plant is used medicinally for reducing fever and for treating contusions and strains. RS: N-5562 (DACB).

Uraria crinita (L.) Desv. ex DC., Prodr. 2: 324. 1825. *Hedysarum crinitum* L., Mant. Pl. 1: 102. 1767. LN: *Dieng-kha-riu*. Evergreen shrubs, rarely occurs in open forest areas, waste sandy places and in thickets. Fl. & fr.: October-February. Use: Plant is used medicinally for stopping bleeding, reducing fever and relieving coughs. RS: N-5542 (DACB).

LYTHRACEAE Saint-Hilaire

Cuphea hyssopifolia Kunth, Nov. Gen. Sp. 6: 199. 1824. *Parsonsia hyssopifolia* (Kunth) Standl., Contr. U.S. Natl. Herb. 23(4): 1018. 1924. LN: *Kuphea*. Evergreen perennial herbs, cultivated. Fl. & fr.: Throughout the year. Use: Leaves and flowers are used as a tonic and in the treatment of fevers and coughs. It has ornamental value. RS: N-5538 (DACB).

Lagerstroemia speciosa (L.) Pers., Syn. Pl. 2: 72. 1806. *Munchausia speciosa* L., Hausvater, 5(1): 357. 1770. LN: *Jarul, Kanta jarul*. Deciduous trees, cultivated. Fl. & fr.: April-August. Use: Wood is used for making carts, doors, windows and house posts. It has ornamental value also. RS: N- 5547(DACB).

CRYPTERONIACEAE DC.

Crypteronia paniculata Blume, Bijdr. 1151. 1827. LN: *Goru-mara, Nishamba*. Deciduous trees, occasionally occurs in moist humid places. Fl. & fr.: November-March. Use: Medicine & Firewood. Wood is suitable for cartwheel, house building and railway sleepers. RS: N-5305 (DACB).

THYMELAEACEAE A.Juss.

Aquilaria malaccensis Lam., Encycl. 1(1): 49. 1783. *Aquilaria agallocha* Roxb., Fl. Ind. 2: 422. 1820. LN: *Agor*. Evergreen trees, cultivated. Fl. & fr.: May-September. Use: Medicine for asthma, bronchitis and rheumatism. RS: KKI-250 (DACB).

MYRTACEAE A.Juss.

Syzygium formosum (Wall.) Masamune, Enum. Phan. Born.: 528. 1942. *Eugenia formosa* Wall., Pl. Asiat. Rar. 2: 6. 108. 1830. LN: *Pania jam, Phul jam*. Evergreen trees, occasionally occurs in sandy soils near streams. Fl. & fr.: December-July. Use: Edible fruits are wildlife supportive. RS: KKI-643 (DACB).

ONAGRACEAE A.Juss.

Ludwigia octovalvis (Jacq.) P.H. Raven, Kew Bull. 15(3): 476. 1962. *Oenothera octovalvis* Jacq., Enum. Syst. Pl. 19. 1760. LN: *Bhuikura, Bunlong, Labanga Lang*. Evergreen perennial herbs, commonly occurs in Marshy and damp areas, side of ditches, swamps and water courses. Fl. & fr.: January-December. Use: Plants is used in wounds. RS: N-4848 (DACB).

MELASTOMATACEAE A.Juss.

Melastoma malabathricum L., Sp. Pl. 1: 390. 1753. *Melastoma affine* D.Don, Mem. Wern. Nat. Hist. Soc. 4: 288. 1823. LN: *Bon tejpata, Tejbohol*. Evergreen shrubs, commonly occurs in open places, thickets and near streams. Fl. & fr.: Throughout the year. Use: Fruit pulp is edible. Leaves are used in the treatment of diarrhoea and dysentery. RS: KKI-644 (DACB).

Sonerila maculata Roxb., Fl. Ind., ed. 1820 1: 180. 1820. LN: *Soneril*. Evergreen perennials herbs, very rarely occurs in shaded damp places in hillsides and stream. Fl. & fr.: June-December. Use: Folk medicine. RS: N-4842 (DACB).

COMBRETACEAE R.Br.

Terminalia bellirica (Gaertn.) Roxb., Pl. Coromandel 2: 54. 1805. *Myrobalanus bellirica* Gaertn., Fruct. Sem. Pl. 2: 90. 1790. LN: *Bohera, Boyra*. Deciduous trees, occasionally occurs open sunny places. Fl. & fr.: March-November. Use: Medicine. Wood is used for making packing cases. RS: KKI-380 (DACB).

ALANGIACEAE DC.

Alangium chinense (Lour.) Harms, Ber. Deutsch. Bot. Ges. 15: 24. 1897. *Stylidium chinense* Lour., Fl. Cochinch. 221. 1790. LN: *Marlezagachh*. Deciduous trees, rarely occurs in forest margins and in open thickets. Fl. & fr.: April-October. Use: Fodder & Timber. Bark is used for the treatment of skin diseases. RS: KKI-394 (DACB). **Fig. 1.**

OLACACEAE R.Br.

Erythralium scandens Blume, Bijdr.: 922. 1826. LN: *Palamkar*. Evergreen climbers, rarely grows along forest edges and in the lowland. Fl. & fr.: August-March. RS: N-5303 (DACB).

Olox acuminata Wall. *ex* Benth., Proc. Linn. Soc. London 1: 89. 1840. Evergreen shrubs, rarely occurs in open places, forest edges and scrub jungles. Fl. & fr.: March-September. Use: Folk medicine. RS: N-5561 (DACB).

LORANTHACEAE A.Juss.

Dendrophthoe falcata (L.f.) Ettingsh, Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 32: 52. 1872. LN: *Phorolla*, *Bajrangi*. Deciduous parasitic shrubs, occasionally occurs on shrubs and trees. Fl. & fr.: Throughout the year. Use: Stem and bark is given for preventing pregnancy. RS: N-5284 (DACB).

OPILIACEAE Valetton

Lepionurus sylvestris Blume, Bijdr. 1148. 1827. LN: *Pinurus*. Evergreen shrubs, very rarely occurs in moist shaded and cool places near streams, Fl. & fr.: Throughout the year. Use: Roots are used as medicine in fever. RS: N-5570 (DACB). **Fig. 16.**

CELASTRACEAE R.Br.

Euonymus glaber Roxb., Fl. Indica 2: 403. 1824. *Euonymus carinatus* Craib, Bull. Misc. Inform. Kew 347. 1926. LN: *Glabernima*. Evergreen trees, occasionally occurs in hill slopes, foot hills and mixed forest areas. Fl. & fr.: October-April. Use: Wood is used as firewood and for making furniture. RS: KKI-621 (DACB).

Euonymus laxiflorus Champ. *ex* Benth., Hooker's J. Bot. Kew Gard. Misc. 3: 333. 1851. Deciduous trees, very rarely occurs in scrub forests and moist areas along streams. Fl. & fr.: March-November. Use: Firewood. RS: N-5253 (DACB).

EUPHORBIACEAE A.Juss.

Actephila excels (Dalz.) Muell.-Arg., Linnaea 32: 78. 1863. *Actephila thomsoni* Müll. Arg., Linnaea 34: 65. 1865. LN: *Lalsa*. Evergreen shrubs, rarely occurs in scrub forests. Fl. & fr.: April-December. Use: Leaves are used as vegetables. RS: KKI-404 (DACB).

Antidesma acidum Retz., Observ. Bot. 5: 30. 1788. LN: *Chutki*, *Multa*. Deciduous trees, occasionally occurs in open moist places. Fl. & fr.: March-January. Use: Fruits are edible. Leaves are used as preservatives. RS: KKI-593 (DACB). **Fig. 2.**

Antidesma montanum Blume, Bijdr. Fl. Ned. India 1124. 1827. *Antidesma montanum* Blume var. *montanum* P.Hoffm., Thai Forest Bull. (Bot.) 28: 150. 2000. LN: *Choto shial buka*. Evergreen trees, occasionally occurs in littoral areas and in thickets along water courses. Fl. & fr.: May-December. Use: Fruit is edible. Roots are used in the treatment of stomachache. RS: KKI-409 (DACB).

Aporosa aurea Hook.f., Fl. Brit. India 5: 351. 1887. LN: *Kechuan*. Evergreen trees, rarely occurs in forest margins. Fl. & fr.: October-February. Use: Wood is used for making household furniture. RS: KKI-650 (DACB).

Bischofia javanica Blume, Bijdr. Fl. Ned. Ind. 17: 1168. LN: *Kainjal*. Deciduous trees, occasionally occurs in forest beds along margins. Fl. & fr.: March-July. Use: Leaves are used as dye and for curing sores. RS: KKI-600 (DACB).

Bridelia retusa (L.) A.Juss., Euphorb. Gen. 109. 1824. *Clutia retusa* L., Sp. Pl. 1475. 1753. LN: *Kata koi*. Deciduous trees, occasionally occurs in sandy areas and in open places. Fl. & fr.: May-January. Use: Fruit is edible. Leaves are used as fodder. Bark is used for urinary concretion. RS: KKI-623 (DACB).

Flueggea virosa (Roxb. ex Willd.) Royle, Ill. Bot. Himal. Mts. 328. 1836. LN: *Khaukra, Shikori*. Deciduous small trees, occasionally occurs in hill slopes and rocky areas. Fl. & fr.: April-August. Use: Tonic & Medicine. RS: KKI-238 (DACB).

Macaranga indica Wight., Icon. Pl. India Orient. 5. 1852. *Macaranga adenantha* Gagnep., Bull. Soc. Bot. France 69. 1923. LN: *Deshi bura*. Evergreen trees, occasionally occurs in interior and forest margin areas. Fl. & fr.: April-December. Use: Gum is applied for healing sores. RS: KKI-645 (DACB).

Phyllanthus sikkimensis Müll.Arg., Linnaea 32: 48. 1863. Sub-shrubs, rarely occurs in forest margins. Fl. & fr.: March-July. RS: KKI-271 (DACB).

Trigonostemon semperflorens (Roxb.) Müll.-Arg., Prodr. 15(2): 1110. 1866. *Clutia semperflorens* Roxb., Fl. Ind. ed. 1832, 3: 730. 1832. Evergreen shrubs, rarely occurs in scrub forests and in shady places of sloppy area. Fl. & fr.: April-November. RS: KKI-405 (DACB). **Fig. 24.**

Trigonostemon viridissimus (Kurz) Airy Shaw, Kew Bull. 25: 545. 1971. *Sabia viridissima* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 41(2): 304. 1872. Evergreen shrubs, rarely occurs in thickets of mixed forests on sandy or rocky soils. Use: Firewood. RS: N-1105 (DACB).

RHAMNACEAE A.Juss.

Gouania leptostachya DC., Prodr. 2: 40. 1825. Evergreen shrubs, occasionally occurs in scrub forests, marshy forest margin areas, often climbing on trees and in thickets. Fl. & fr.: August-December. Use: Young leaves are used as vegetables and wildlife supportive. RS: KKI-417 (DACB).

LEEACEAE Dumort.

Leea rubra Blume ex Spreng., Syst. Veg. 1: 670. 1824. LN: *Lal bhanga*. Evergreen shrubs, occasionally occurs in forest edge and in dry areas. Fl. & fr.: May-July. Use: Roots tincture is used in the treatment of stomach-ache. Firewood. RS: KKI-420 (DACB).

VITACEAE A.Juss.

Ampelocissus barbata (Wall.) Planch. in DC., Monogr. Phan. 5: 372. 1887. *Vitis barbata* Wall. 1824. LN: *Jarila-lahari*. Evergreen climbers, occasionally occurs in hill slopes, foot hills and in bushy thickets. Fl. & fr.: June-October. Use: Edible fruit. RS: KKI-237 (DACB).

Cissus repanda (Wight & Arn.) Vahl., Symb. Bot. 3: 18. 1794. *Vitis repanda* (Vahl) Wight & Arn. Prodr. Fl. Ind. Orient. 1: 125. 1834. LN: *Medmedia lata*. Evergreen climbers, occasionally occurs in forest margins, thickets and grassy areas. Fl. & fr.: August-October. Use: Bark yields good fiber. Powdered root is applied to cuts and fractures. RS: KKI-390 (DACB).

POLYGALACEAE R.Br.

Polygala alphonisii Buch.-Ham. ex DC., Prodr. 1: 327. 1824. Evergreen annual herbs, rarely occurs in forest edges, marshy areas along water courses. Fl. & fr.: July-September. RS: N-4850 (DACB).

SAPINDACEAE A.Juss.

Allophylus samarensis Merr., Philipp. J. Sci., C 11: 192. 1916. Evergreen shrubs, commonly occurs in hill slopes along the chhara. Fl. & fr.: May-November. RS: N-5261 (DACB).

Lepisanthes rubiginosa (Roxb.) Leenh., Blumea 17(1): 82. 1969. *Sapindus rubiginosus* Roxb., Pl. Coromandel 1: 44, pl. 62. 1795. LN: *Barahorina*. Evergreen shrubs, rarely grows on open areas and forest edges. Fl. & fr.: November-May. Use: Young shoots are eaten as vegetables. RS: KKI-595.

Litchi sinensis Sonner, Voy. India 3: 255. 1782. LN: *Lichu*. Evergreen trees, cultivated. Fl. & fr.: February-April. Use: Edible fruit is wildlife supportive. RS: N-4846 (DACB).

ANACARDIACEAE R.Br.

Mangifera laurina Blume, Mus. Bot. 1: 195. 1850. *Mangifera longipes* Griff., Not. Pl. Asiat. 4: 419. 1854. LN: *Jangli aam*. Evergreen trees, rarely occurs in low and marshy places. Fl. & fr.: February-November. Use: Edible fruits is wildlife supportive. RS: N-5246 (DACB).

MELIACEAE A.Juss.

Aphanamixis polystachya (Wall.) R.N. Parker, Indian Forester 57: 486. 1931. *Aglaia polystachya* Wall., Fl. Ind. 2: 429. 1824. LN: *Pitraj, Royna*. Evergreen trees, occasionally occurs in deep forests, and in thickets. Fl. & fr.: February-May. Use: Timber is suitable for house construction and furniture. RS: N-5297 (DACB).

RUTACEAE A.Juss.

Aegle marmelos (L.) Corr., Trans. Linn. Soc. London 5: 223. 1800. *Crateva marmelos* L., Sp. Pl. 444. 1753. LN: *Bel*. Deciduous trees, cultivated. Fl. & fr.: April-December. Use: Fruit is edible. It is laxative, eases stomachache and supports healthy function of stomach. RS: N-4833 (DACB).

Atalantia roxburghiana var. **kwangtungensis** (Merr.) Swingle, J. Arnold Arbor. 21: 129. 1940. *Atalantia kwangtungensis* Merr., Philipp. J. Sci. 21: 496. 1922. Evergreen shrubs, occasionally occurs in moist and shady places along water courses. Fl. & fr.: January-June. RS: N-4833 (DACB).

Citrus medica L., Sp. Pl. 782. 1753. *Citrus crassa* Hassk., Cat. Hort. Bot. Bogor. 217. 1844. LN: *Bura lebu*. Evergreen trees, rarely occurs in moist swamp areas. Fl. & fr.: Throughout the year. Use: fruits are eaten as salads. RS: N-5296 (DACB).

Clausena anisata (Willd.) Hook.f. ex Benth., Niger Fl. 256. 1849. *Amyris anisata* Willd., Sp. Pl. 2: 337. 1799. *Clausena suffruticosa* (Roxb.) Wight & Arn., Prodr. Fl. Ind. Orient. 96 1834. LN: *Kalomaricha*. Evergreen shrubs, occasionally occurs in deep forests and in thickets. Fl. & fr.: March-June. Use: Leaves and roots are used for fever, pneumonia and headache. RS: KKI-648 (DACB). **Fig. 8.**

Clausena heptaphylla (Roxb.) Wight & Arn., Prodr. Fl. India Orient. 95. 1834. *Amyris heptaphylla* Roxb. ex DC., Prodr. 2: 82. 1825. LN: *Panbahar*. Small, evergreen trees, commonly occurs in open forest areas and in sunny places. Fl. & fr.: March-August. Use: Fresh leaves area chewed with betel leaf. RS: N-5307 (DACB).

Clausena lansium (Lour.) Skeels, Bull. Bur. Pl. Industr. U.S.D.A. 168: 31. 1909. *Quinaria lansium* Lour., Fl. Cochinch. 272. 1790. Evergreen trees, very rarely occurs in forest edges, gallery forests and humid areas. Use: Fruit is edible. Plants is used for gastro-intestinal problems. RS: N-5265 (DACB). **Fig. 7.**

Glycosmis pentaphylla (Retz.) DC., Prodr. 1: 538. 1824. *Limonia pentaphylla* Retz., Observ. Bot. 5: 24. 1788. LN: *Motkila, Dat majani*. Evergreen trees. Occasionally occurs in hillsides and in thickets. Fl. & fr.: Throughout the year. Use: Plant is used for treatment of diarrhoea, coughs and jaundices. Firewood. RS: KKI-603 (DACB).

Micromelum minutum Wight & Arn., Prodr. Fl. India Orient. 448. 1834. LN: *Dulia*. Evergreen trees, occasionally occurs in deep forests and in thickets. Fl. & fr.: Throughout the year. Use: Leaves and roots are used as a febrifuge. RS: KKI-225 (DACB).

OXALIDACEAE R.Br.

Biophytum sensitivum (L.) DC., Prodr. 1: 690. 1824. *Oxalis sensitiva* L., Sp. Pl. 434. 1753. LN: *Bannaringa*. Annual herbs, rarely occurs in hill slopes and edges of the forest. Fl. & fr.: Throughout the year. Use: Plant is used against fever and small pox. RS: N-4852 (DACB).

BALSAMINACEAE Richard

Impatiens trilobata Colebr., Exot. Fl. 1825. *Impatiens flavida* Hook.f. & Thomson, J. Proc. Linn. Soc. Bot. 4: 127. 1860. LN: *Trii-khanda Balsam*. Annual herbs, very rarely occurs in open and shady moist places. Fl. & fr.: July-October. Use: Medicine. RS: N-5306 (DACB).

ARALIACEAE A.Juss.

Schefflera elliptica (Blume) Harms., Nat. Pflanzenfam. 3: 39. 1894. *Sciadophyllum ellipticum* Blume, Bijdr. 878. 1826. LN: *Jeng-jil, Dahinakath*. Evergreen trees, very rarely occurs in thickets and in valleys or epiphytic on large trees. Fl. & fr.: January-September. Use: Bark is used in the treatment of coughs. Wood is used to relieve toothache. RS: N-5552 (DACB). **Fig. 22.**

Trevesia palmata (Roxb.) Vis., Mem. Acad. Sci. Torin. 2: 4: 262. 1842. *Gastonia palmata* Roxb., Bot. Reg. 11: t. 894. 1825. LN: *Vombal, Kawhtebe*. Evergreen, small trees, occasionally occurs in shaded areas of primary forests. Fl. & fr.: January-May. RS: KKI-634 (DACB).

APIACEAE Lindl.

Eryngium foetidum L., Sp. Pl. 232. 1753. *Eryngium antihystericum* Rottler, Acta Lit. Univ. Hafn. 1: 288. 1778. LN: *Bwhak pata*. Perennial herbs, escaped from cultivation. Fl. & fr.: April-January. Use: Leaves are used as a flavoring agent and has medicinal value. RS: N-5321 (DACB).

APOCYNACEAE A.Juss.

Catharanthus roseus (L.) G.Don, Gen. Hist. 4: 95. 1837. *Vinca rosea* L., Syst. Nat. ed. 10, 2: 944. 1759. LN: *Nayantara*. Perennial herbs, cultivated. Fl. & fr.: Throughout the year. Use: Ornamental. Plant is used in the treatment of malaria, skin diseases, diarrhea, hypertension and diabetes. RS: N-5281 (DACB).

Holarrhena pubescens Wall. ex G.Don, Gen. Hist. 4: 78. 1837. *Holarrhena antidiysenterica* Wall. ex A.DC., Prodr. 8: 413. 1844. LN: *Kurchi, Kuruj*. Deciduous trees, occasionally occurs in scrub forests. Fl. & fr.: April-January. Use: Firewood. RS: KKI-647 (DACB).

Rauvolfia serpentina (L.) Benth. ex Kurz, Forest Fl. Burma. 2: 171. 1877. *Ophioxylon serpentinum* L., Sp. Pl. 2: 1043. 1753. LN: *Sarpagandah, Chandra*. Evergreen shrubs, occasionally occurs in shady and moist places in forest beds. Fl. & fr.: April-October. Use: Root is used for treating blood pressure, urinary contraction and dysentery. RS: KKI-615 (DACB).

Tabernaemontana divaricata (L.) R.Br. ex Roem. & Schult., Syst. Veg. 4: 427. 1819. *Nerium divaricatum* L., Sp. Pl. 209. 1753. *Tabernaemontana recurva* Roxb., Hort. Bengal. 20. 1814. LN: *Rupa-toal, Jongli-togor*. Evergreen trees, commonly occurs in moist places along streams and

thickets. Fl. & fr.: June-December. Use: Roots is used in the treatment of diarrhea. RS: KKI-381 (DACB).

Wrightia arborea (Dennst.) Mabb., Taxon 26: 533. 1977. *Periploca arborea* Dennst., Schlüssel Hortus Malab. 15. 1818. *Wrightia wallichii* A. DC., Prodr. 8: 405. 1884. LN: *Dudh-kurus, Dudhi*. Deciduous trees, occasionally occurs in forest thickets, along streams. Fl. & fr.: May-January. Use: Bark is applied as an antidote against snake bites. RS: N-5309 (DACB).

SOLANACEAE A.Juss.

Physalis angulata L., Sp. Pl. 183. 1753. *Physalis ramosissima* Mill., Gard. Dict. 1768. LN: *Fotka*. Annual herbs, occasionally occurs in sunny places, open forest areas and forest margins. Fl. & fr.: February-August. Use: Fruits are used as vegetables. Leaves are used for stomach disorders. RS: KKI-261 (DACB).

Solanum torvum Swartz, Nov. Gen. Sp. Pl. Prodr. 47. 1788. LN: *Gota Begun, Tit Begun*. Evergreen shrubs, occasionally occurs in waste places, roadsides and thickets. Fl. & fr.: Throughout the year. Use: Fruits are eaten as vegetables. RS: KKI-233 (DACB).

CONVOLVULACEAE A.Juss.

Hewittia malabarica (L.) Suresh, An Interpretation of Van Rheedee's Hortus Malabaricus 88. 1988. *Convolvulus malabaricus* L., Sp. Pl. 1: 155. 1753. LN: *Hiwet*. Perennial climbers, occasionally occurs in sunny places in thickets and at forest edges. Fl. & fr.: Throughout the year. Use: Leaves are used as vegetables. Bark is used for making ropes. RS: KKI-260 (DACB).

Merremia umbellata (L.) Hallier f., Bot. Jahrb. 16: 552. 1893. *Convolvulus umbellatus* L., Sp. Pl. 1: 155. 1753. Perennial climbers, occasionally occurs in forest margins and in thickets. Fl. & fr.: February-May. Use: Leaves are used as vegetables. RS: KKI-620 (DACB).

BORAGINACEAE A.Juss.

Cordia myxa L., Sp. Pl. 199. 1753. *Cordia latifolia* Wall. ex G. Don, Gen. Hist. 4: 375. 1837. LN: *Lasura*. Deciduous trees, rarely occurs in hill slopes along streams. Use: Pulp of drupe is edible. Bark, leaves & fruit have medicinal properties. Firewood. RS: N-5271 (DACB). **Fig. 10.**

Cordia subcordata Tabl., Encycl. n. 1899. 1792. Evergreen trees, very rarely occurs in sandy open areas and in thickets. Use: Plant has medicinal properties also used as firewood. RS: N-5254 (DACB). **Fig. 11.**

VERBENACEAE A.St.Hil.

Callicarpa arborea Roxb., Fl. Indica 1: 405. 1820. *Premna arborea* (Roxb.) Roth., Nov. Pl. Sp. 287. 1821. LN: *Bormala, Khoja*. Evergreen trees, commonly occurs in hill slopes, scrub jungle, forest edges. Fl. & fr.: May-November. Use: Leaf is taken to relieve stomachache. Root is used to treat internal bleeding. RS: KKI-269 (DACB).

Clerodendrum glandulosum Lindl., Edwards's Bot. Reg. 30. 1844. *Clerodendrum colebrookianum* Walp., Repert. Bot. Syst. 4: 114. 1845. LN: *Bonbhati*. Evergreen shrubs, occasionally occurs in hilly forest areas. Fl. & fr.: May-October. Use: Plant is used for rheumatic pains and vegetables. RS: KKI-416 (DACB). **Fig. 9.**

Premna esculenta Roxb., Fl. Indica 3: 81. 1832. LN: *Lalana, lalong*. Evergreen shrubs, occasionally occurs in scrub forests and thickets. Fl. & fr.: April-August. Use: Vegetables & firewood. RS: N-5556 (DACB).

Rotheca serrata (L.) Steane & Mabb, Novon 8: 206. 1998. *Volkameria serrata* L., Mant. Pl. 1: 90. 1767. LN: *Akhandi*. Evergreen shrubs, rarely found in hill slopes and in thickets. Fl. & fr.: March-June. Use: Plant is used for skin diseases, headache, leprosy and persistent fever. RS: N-5549 (DACB).

Tectona grandis L.f., Suppl. Pl. 151. 1782. *Theka grandis* (L.f.) Lam., Tabl. Encycl. 2: 111. 1797. LN: *Segun*. Deciduous trees, cultivated. Fl. & fr.: July-November. Use: Timber is used for making furniture, construction purposes and ship building. RS: KKI-4844 (DACB).

LAMIACEAE Martinov

Mosla dianthera (Buch.-Ham. ex Roxb.) Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 10: 457. 1865. *Lycopus diantherus* Buch.-Ham. ex Roxb, Fl. Ind. 1: 144. 1820. LN: *Moshla*. Deciduous, annual herbs, very rarely found in marshy places or at the edge of ditches. Fl. & fr.: October-June. Use: leaves used in heart burn disease. RS: KKI-255 (DACB). **Fig. 17.**

GESNERIACEAE Dumort.

Boeica filiformis C.B. Clarke, Commelyn. Cytrandr. Bengal. 118. 1874. LN: *Bikafil*. Evergreen perennial herbs, very rarely occurs in hilly areas along the spring. Fl. & fr.: July-November. Use: Ornamental. RS: N-1095 (DACB). **Fig. 4.**

ACANTHACEAE A.Juss.

Lepidagathis linearis T.Anderson, J. Linn. Soc. 9: 496. 1867. LN: *Lambugatis*. Perennial herbs, rarely occurs in dry sunny areas. Fl. & fr.: February-April. Use: Medicine. RS: KKI-631 (DACB).

Nelsonia canescens (Lam.) Spreng., Syst. Veg. 1: 42. 1824. *Justicia canescens* Lam., Tabl. Encycl. 1: 41. 1791. LN: *Paramul*. Annual herbs, occasionally occurs in wet places and open forest areas. Fl. & fr.: October-February. Use: Plant is used for treating smallpox and diarrhea. RS: KKI-618 (DACB).

Phlogacanthus guttatus Nees, Pl. Asiat. Rar. 3: 99. 1832. *Justicia guttata* Wall., Pl. Asiat. Rar. 1: 24. 28. 1830. Evergreen shrubs, rarely occurs in open places and hill slopes. Fl. & fr.: December-April. Use: Medicine. RS: KKI-635 (DACB).

Phlogacanthus thyrsoformis (Roxb. ex Hardw.) Mabb., Bot. Hist. Hortus Malabaricus 189. 1980. *Justicia thyrsoformis* Hardw., Asiat. Res. 6: 349. 1799. LN: *Rambasak*. Evergreen shrubs, occasionally occurs in hilly areas. Fl. & fr.: December-February. Use: Flower is eaten as vegetables. RS: KKI-252 (DACB). **Fig. 20.**

Pseuderanthemum latifolium B.Hansen, Nordic J. Bot. 9(2): 213. 1989. LN: *Neta murali*. Evergreen perennial herbs, occasionally occurs in scrub forests and thickets. Fl. & fr.: April-September. Use: Medicine. RS: KKI-634 (DACB).

Rungia pectinata (L) Nees, Prodr. 11: 470. 1847. *Justicia pectinata* L., Amoen. Acad. 4: 299. 1760. LN: *Pindi*. Perennial herbs, occasionally occurs in warm moist shady areas along streams. Fl. & fr.: November-May. Use: Plant is used for treating small pox and swelling. RS: KKI-619 (DACB).

Strobilanthes rufescens (Roth) T.Anderson, J. Linn. Soc. Bot. 9: 472. 1867. *Ruellia rufescens* Roth, Nov. Pl. Sp. 304. 1821. Shrubs, rarely occurs in hilly areas. Fl. & fr.: December-April. RS: KKI-605 (DACB).

Thunbergia grandiflora (Roxb. *ex* Rottl.) Roxb., Bot. Reg. 6: 6. 1820. *Flemingia grandiflora* Roxb. *ex* Rottl., Neue Schriften Ges. Naturf. Freunde Berlin 4: 202. 1803. LN: *Nil lata*. Evergreen climbers, commonly occurs in forest and thickets. Fl. & fr.: May-November. Use: Medicine; Ornamental. RS: KKI-387 (DACB).

PEDALIACEAE R.Br.

Sesamum indicum L., Sp. Pl. 634. 1753. *Sesamum orientale* L., Sp. Pl. 634. 1753. LN: *Til*. Evergreen annual herbs, escaped from cultivation. Fl. & fr.: February-October. Use: Seeds are used as salad and source of edible oil. RS: N-4828 (DACB).

BIGNONIACEAE A.Juss.

Oroxylum indicum (L.) Kurz, Forest Fl. Burma 2: 237. 1877. *Bignonia indica* L., Sp. Pl. 2: 625. 1753. LN: *Kanaidingi*, *Sanapatha*, *Shona*. Deciduous trees, occasionally occurs in scrub forests and thickets. Fl. & fr.: June-March. Use: Vegetable & Medicine. RS: N-5325 (DACB).

RUBIACEAE A.Juss.

Aidia pseudospicata Ridsdale, Blumea 41: 149. 1996. LN: *Aidakata*. Evergreen trees, occasionally occurs in moist hilly areas along water courses. Fl. & fr.: April-December. RS: KKI-629 (DACB).

Argostemma sarmentosum Wall., Fl. Ind. 2: 324. 1824. LN: *Argosa*. Annual or perennial herbs, very rarely occurs in shady places in deep forests. Fl. & fr.: June-August. RS: N-5545 (DACB).

Chassalia curviflora (Wall.) Thwaites., Enum. Pl. Zeyl. 150. 1859. *Psychotria curviflora* Wall., Fl. Ind. 2: 167. 1824. LN: *Hel gaas*. Evergreen shrubs, occasionally occurs in open areas, hill slopes and forest edges. Fl. & fr.: April-February. RS: N-5266 (DACB). **Fig. 5.**

Ixora cuneifolia Roxb., Fl. Indica 1: 380. 1820. *Ixora rosea* Wall., Fl. Indica 1: 398. 1820. LN: *Beophul*. Evergreen shrubs, commonly occurs in open places and thickets. Fl. & fr.: March-July. Use: Ornamental. RS: KKI-272 (DACB).

Knoxia sumatrensis (Retz.) DC., Prodr. 4: 569. 1830. *Spermacoce sumatrensis* Retz., Observ. Bot. 4: 23. 1786. Perennial herbs, rarely occurs in open areas and thickets. Fl. & fr.: August-January. RS: KKI-278 (DACB).

Mitragyna parvifolia (Roxb.) Korth., Observ. Naubl. Indic. 19. 1839. *Nauclea parvifolia* Roxb., Pl. Coromandel 1: 40. 1795. LN: *Phuti kodom*, *Keli kadam*. Deciduous trees, 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-637 (DACB).

Mussaenda roxburghii Hook.f, Fl. Brit. India 3: 87. 1880. *Menestoria tocoyenae* DC. Prodr. 4: 390. 1830. LN: *Sildaaura*, *Sichamba*. Evergreen shrubs, commonly occurs in moist and shaded areas along forest edges. Fl. & fr.: May-February. Use: Plant is used for the treatment of boils, rheumatism and fever. RS: N-5313 (DACB).

Mycetia malayana (G.Don) Craib, Bull. Misc. Inform. Kew 1914: 29. 1914. *Wendlandia malayana* G.Don, Gen. Hist. 3: 519. 1834. Evergreen shrubs, rarely occurs in moist damp places. Fl. & fr.: Throughout the year. RS: N-5262 (DACB).

Mycetia mukerjiana Deb & R.M.Dutta, Indian Forester 91: 272. 1965. Small, evergreen trees, very rarely grows on calcareous soils along shady areas. Fl. & fr.: June-October. RS: N-5319 (DACB). **Fig. 19.**

Oldenlandia glabra (R.Br. ex Wall.) Kuntze, Revis. Gen. Pl. 1: 292. 1891. *Knoxia glabra* (R.Br. ex Wall.) DC., Prodr. 4: 569. 1830. Annual herbs, rarely occurs in moist places near water courses. Fl. & fr.: May-October. Use: Plant is used for stomachache and headache. RS: N-5273 (DACB).

Psychotria silhetensis Hook.f., Fl. Brit. India 3: 174. 1880. *Uragoga silhetensis* (Hook.f.) Kuntze, Revis. Gen. Pl. 2: 962. 1891. Shrubs, commonly occurs in open forest areas and hill slopes. Fl. & fr.: April-January. RS: N-5591 (DACB).

Spermacoce alata Aubl., Hist. Pl. Guiane 60. 1775. LN: *Ghuoijhil shak*. Perennial herbs, commonly occurs in open areas and scrub forests. Fl. & fr.: December-April. Use: Leaf is used for boil treatment. RS: N-5592 (DACB).

ASTERACEAE Martinov

Blumea lanceolaria (Roxb.) Druce, Bot. Soc. Exch. Club Br. Isles 4: 609. 1916. *Conyza lanceolaria* Roxb., Fl. Ind. ed. 2, 3: 432. 1832. Perennial herb, rarely occurs in moist soils near water falls. Fl. & fr.: November-March. Use: Leaves are used as flavoring agent. RS: KKI-600 (DACB).

Erigeron floribundus (Kunth) Sch.Bip., Mandon, Bull. Soc. Bot. France 12: 81. 1865. *Conyza floribunda*. Nat., ed. 10, 2: 1233. 1759. LN: *Lata deji*. Evergreen perennial herbs, escaped from cultivation. Kunth, Nova Gen. Sp. ed. fol. 4. 57. 1818. Annual herbs, rarely occurs in hill slopes. Fl. & fr.: September-February. RS: KKI-267 (DACB).

Crassocephalum crepidioides (Benth.) S. Moore, J. Bot. 50: 211. 1912. *Gynura crepidioides* Benth., Niger Fl. 1849. LN: *Duubbcrepi*. Evergreen perennial herbs, occasionally occurs in shady areas, wet hill slopes and bank of streams. Fl. & fr.: Throughout the year. Use: leaves sap is given to treat stomach disorder. RS: N-5317 (DACB).

Mikania cordata (Burm.f.) B.L.Rob., Contr. Gray Herb. 1934. *Eupatorium cordatum* Burm.f., Fl. Ind. 1768. *Mikania scandens*, auct. non L. 1876. LN: *Tufani-lata*. Evergreen perennial climbers, very commonly occurs in forest openings along streams. Fl. & fr.: October-February. Use: Leaf juice is used for stop bleeding, snake bite and scorpion stings. RS: N-4829 (DACB).

Sphagneticola trilobata (L.) Pruski, Mem. New York Bot. Gard. 78: 114. 1996. *Silphium trilobatum* L. Fl. & fr.: March-October. Use: Plant is used to treat infections, indigestion and hepatitis. RS: KKI-407 (DACB). **Fig. 23.**

LILIOPSISIDA

ARECACEAE C.H.Schultz-Schultzen.

Areca catechu L., Sp. Pl. 1189. 1753. LN: *Supari*. Evergreen palm trees, cultivated near roadside and homestead. Fl. & fr.: March-September. Use: Medicine & Firewood. Sliced seed (betel nut) is chewed as a mild narcotic. RS: N-5526 (DACB).

Cocos nucifera L., Sp. Pl. 1188. 1753. *Cocos indica* Royle, Ill. Bot. Himal. Mts. 395. 1840. LN: *Narikel*. Evergreen palm trees, cultivated in homestead. Fl. & fr.: Throughout the year. Use: Fruit is edible. Oil is extracted from karnel. Coir is made from mesocarp of fruit. Toddy is made from the juice extracted from inflorescence. RS: N-5528 (DACB).

Wallichia oblongifolia Griff., Calcutta J. Nat. Hist. 5: 486. 1845. *Wallichia densiflora* Mart., Hist. Nat. Palm. 3: 190. 1845. LN: *Dwarf fishtail*. Evergreen palm trees, rarely occurs in rocky places and steep slopes. Fl. & fr.: April-May. Use: Leaves are used as thatching and making brooms. Stem is used as vegetables. RS: N-5311 (DACB).

ARACEAE A.Juss.

Aglaonema hookerianum Schott, *Bonplandia* 7: 30. 1859. *Aglaonema clarkei* Hook.f., *Fl. Brit. Ind.* 6: 529. 1893. LN: *Harinssak, Shakkosala*. Evergreen perennial herbs; commonly occurs in hill slopes near water flow. Fl. & fr.: June-July. Use: Ornamental. RS: N-5243 (DACB).

Amorphophallus bulbifer (Roxb.) Blume, *Rumphia* 1: 148. 1837. *Arum bulbiferum* Roxb., *Fl. Ind.* ed. 1832, 3: 510. 1832. LN: *Jongli-ol*. Evergreen perennial herbs, occasionally occurs in moist and shady places. Fl. & fr.: May-October. Use: Vegetables. RS: N-5225 (DACB).

Colocasia fallax Schott, *Bonplandia* 7: 28. 1859. LN: *Bankachu, Falkachu*. Evergreen perennial herbs; commonly occurs in wet places near water courses. Fl. & fr.: May-July. Use: Vegetables. RS: N-5531 (DACB).

Colocasia oresbia A. Hay, *Sandakania* 7: 31-48. 1996. LN: *Sadakachu*. Evergreen perennial herbs, commonly occurs in open places near banks. Fl. & fr.: June-September. RS: N-5244 (DACB).

Rhaphidophora hongkongensis Schott, *Prodr. Syst. Aroid.* 378. 1860. *Pothos obliquus* Wall. *ex* Hook.f., *Fl. Brit. India* 6: 555. 1893. LN: *Honkongifido*. Evergreen climbers; occasionally occurs in hill slopes, on trees or rocky areas. Fl. & fr.: May-August. Use: Medicine. RS: N-5242 (DACB).

Stuednera discolor W.Bull *ex* T.Moore & Mast., *Gard. Chron.* n.s., 2(51): 708. 1875. *Stuednera colocasiifolia* var. *discolor* (W.Bull) Engl., *Monogr. Phan.* 2: 452. 1879. LN: *Bahari-kachu*. Evergreen perennial herbs, commonly occurs in moist lowland areas. Fl. & fr.: May-August. Use: Ornamental. RS: N-5528 (DACB).

COMMELINACEAE R.Br.

Murdannia japonica (Thunb.) Faden, *Taxon* 26: 142. 1977. *Aneilema japonicum* (Thunb.) Kunth, *Enum. Pl.* 4: 70. 1843. *Murdannia elata* (Vahl) G.Brückn., *Nat. Pflanzenfam.* ed. 2, 15a: 173. 1930. LN: *Lamba murdan*. Evergreen perennial herbs, occasionally occurs in humid areas, forest margins and thickets. Fl. & fr.: June-September. Use: Medicine. RS: KKI-398 (DACB).

Pollia secundiflora (Blume) Bakh.f., *Commelina secundiflora* Blume, *Enum. Pl. Javae* 1: 3. 1827. LN: *Kandipoli*. Evergreen perennial herbs, occasionally occurs in deep forests and in thickets. Fl. & fr.: August-September. Use: Medicine. RS: KKI-243 (DACB).

CYPERACEAE A.Juss.

Cyperus cyperoides (L.) Kuntze, *Revis. Gen. Pl.* 3(2): 333. 1898. *Cyperus cyperoides* (L.) Britton, *Bull. Bot. Dept.* 5: Suppl. 1: 8. 1907. LN: *Bara guthubi, Kucha kusha*. Evergreen annual or perennial herbs, very commonly occurs in open, sunny or lightly shaded places, ditch margins, wet places, forest clearings and thickets. Fl. & fr.: Throughout the year. Use: Medicine & Food. RS: N-5288 (DACB).

Cyperus diffusus Vahl, *Enum. Pl. Obs.* 2: 321. 1805. *Cyperus bancanus* Miq., *Fl. Ned. Ind., Eerste Bijv.* 599. 1861. Evergreen perennial herbs, commonly occurs in thickets, shady moist places and hill slopes. Fl. & fr.: June-September. Use: Medicine. RS: KKI-235 (DACB).

Hypolytrum nemorum (Vahl) Spreng., *Syst. Veg.* 1: 233. 1825. *Hypaelyptum nemorum* (Vahl) P.Beauv., *Fl. Oware* 2: 13. 1810. LN: *Trumram ghasi*. Evergreen perennial herbs, rarely occurs in shady moist places near streams. Fl. & fr.: July-February. Use: Medicine. RS: KKI-640 (DACB).

Scleria levis Retz., *Observ. Bot.* 4: 13. 1786. LN: *Chas gachsi*. Evergreen perennial herbs, commonly occurs in moist shallow areas and margins of the forests. Fl. & fr.: June-September. RS: N-5322 (DACB).

POACEAE Barnhart

Cyrtococcum patens (L.) A.Camus, *Bull. Mus. Natl. Hist. Nat.* 27: 118. 1921. *Panicum patens* L., *Sp. Pl.* 58. 1753. LN: *Patcocca grass*. Evergreen perennial herbs, commonly occurs in moist places along streams. Fl. & fr.: September-February. Use: Soil binder. RS: N-5287 (DACB).

Melocanna baccifera (Roxb.) Kurz., *Prelim. Rep. Forest Pegu App. B:* 94. 1875. *Bambusa baccifera* Roxb., *Fl. Indica* 2: 197. 1832. LN: *Muli, Tarai*. Evergreen perennial bamboo with clump diffuses, very commonly occurs in vast stands, on hilly ground. Fl. & fr. April-September: Use: Young shoots are edible. Fodder grass. RS: N-4839 (DACB).

Setaria palmifolia (J.Koenig) Stapf, *J. Linn. Soc., Bot.* 42: 186. 1914. *Chaetochloa palmifolia* (J.Koenig) Hitchc. & Chase, *Contr. U. S. Natl. Herb.* 18: 348. 1917. LN: *Urodhan*. Evergreen perennial herbs, occasionally occurs in open forests, thicket margins, shady areas. Fl. & fr.: August-December. Use: Medicine. RS: N-5548 (DACB).

Thysanolaena latifolia (Roxb. ex Hornem.) Honda, *J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot.* 3: 312. 1930. *Melica latifolia* Roxb. ex Hornem., *Hort. Bot. Hafn. Suppl.*: 117. 1819. *Thysanolaena maxima* (Roxb.) Kuntze, *Revis. Gen. Pl.* 2: 784. 1891. LN: *Jharu phul*. Evergreen perennial herbs, very commonly occurs in hillsides and valleys, in thickets, forest margins, open grasslands, associated with other trees. Fl. & fr.: April-August. Use: Fibers, Brooms. RS: N-5301 (DACB).

MUSACEAE A.Juss.

Musa ornata Roxb., *Fl. Indica* 2: 488. 1824. *Musa speciosa* Ten., *Index Seminum (NAP)* 1829: 16. 1829. LN: *Pahari Kola*. Evergreen perennial herbs, occasionally occurs in moist and wet places. Fl. & fr.: March-December. Use: Fruit edible. RS: N-4839 (DACB).

Musa paradisiaca L., *Sp. Pl.* 1043. 1753. *Musa sapientum* L., *Syst. Nat. ed. 10, 2:* 1303. 1759. LN: *Kola*. Evergreen perennial herbs, cultivated. Fl. & fr.: Throughout the year. Use: Fruits are edible. Medicine. RS: N-5590 (DACB).

ZINGIBERACEAE Lindl.

Etlingera linguiformis (Roxb.) R.M. Smith, *Notes Roy. Bot. Gard. Edinburgh* 43: 246. 1986. *Elettaria linguiformis* (Roxb.) Schult., *Mant.* 1: 25. 1822. LN: *Tara*. Evergreen perennial herbs, commonly occurs in shady hill slopes, forest floors and near streams. Fl. & fr.: June-October. Use: Medicine. RS: N-5248 (DACB).

Globba racemosa Sm., *Exot. Bot.* 2: 115. 1806. *Globba orixensis* Roxb., *Asiat. Res.* 11: 38. 1810. LN: *Jhansi globba*. Evergreen annual herbs, commonly occurs on shady areas and in thickets. Fl. & fr.: May-September. Use: Ornamental. RS: N-5330 (DACB).

Globba spathulata Roxb., *Fl. Ind.* 1: 83. 1920. *Mantisia spathulata* (Roxb.) Schult., *Mant.* 1: 49. 1822. LN: *Mosa globba*. Evergreen perennial herbs, very rarely occurs on moist lowlands near water courses. Fl. & fr.: April-June. Use: Ornamental. RS: KKI-226 (DACB). **Fig. 15.**

Larsenianthus careyanus (Benth.) W.J.Kress & Mood, *PhytoKeys* 1: 24. 2010. *Hitchenia careyana* Benth, *Gen. Pl.* 3: 643. 1883. LN: *Sichnana*. Evergreen perennial herbs, rarely occurs in forest edges and marshy areas. Fl. & fr.: July-November. Use: Ornamental. RS: N-5289 (DACB).

COSTACEAE Nakai.

Cheilocostus speciosus (J.König) C. Specht, Taxon 55: 159. 2006. *Costus speciosus* (J.König) Sm., Trans. Linn. Soc. London 1: 249. 1791. LN: *Keumul*, *Kemul*, *Khustha*. Evergreen rhizomatous annual or perennial herbs, commonly occurs in damp forests. Fl. & fr.: September-December. Use: Medicine. RS: N-5583 (DACB).

MARANTACEAE Peterson

Phrynium pubinerve Blume, Enum. Pl. Javae 38. 1827. *Phrynium laoticum* Gagnep., Bull. Soc. Bot. France 54: 409. 1907. LN: *Pashompitali*. Evergreen perennial herbs, rarely occurs in wet shaded places in dense forests near water courses. Fl. & fr.: August-December. Use: Leaves used as wrapping materials. RS: N-5290 (DACB).

LILIACEAE A.Juss.

Asparagus racemosus Willd., Sp. Pl. 2: 152. 1799. LN: *Shatamuli*. Evergreen perennial herbs, rarely occurs in moist places near streams or hill slopes. Fl. & fr.: November-March. Use: Vegetables & Medicine. RS: N-5240 (DACB).

Hymenocallis littoralis (Jacq.) Salisb., Trans. Hort. Soc. London 1: 338. 1812. *Pancreatium littorale* Jacq., Select. Stirp. Amer. Hist. 99. 1763. LN: *Upakallis*, *Vhui lily*. Evergreen perennial herbs, rarely occurs in open sunny areas. Fl. & fr.: April-October. Use: Ornamental. RS: N-5269 (DACB).

Molineria capitulata (Lour.) Herb., Amaryllidaceae 84. 1837. *Curculigo capitulata* (Lour.) Kuntze, Revis. Gen. Pl. 2: 703. 1891. LN: *Satipata*. Evergreen perennial herbs, commonly occurs in shady, moist places and hill slopes. Fl. & fr.: February-September. Use: Medicine, Fiber. RS: KKI-224 (DACB).

TACCACEAE Dumort.

Tacca integrifolia Ker Gawl., Bot. Mag. 35: t. 1448. 1812. *Tacca cristata* Jack, Malayan Misc. 1(5): 23. 1820. LN: *Mati munda*. Evergreen perennial herbs, rarely occurs in hilly areas near streams. Fl. & fr.: March-November. Use: Medicine. RS: KKI-638 (DACB).

SMILACACEAE Vent.

Smilax glabra Wall *ex* Roxb., Fl. Ind. ed. 1832, 3: 792. 1832. Evergreen climbers, rarely occurs in hill slopes and thickets. Fl. & fr.: November-March. Use: Rhizomes has medicinal values. RS: KKI-654 (DACB)

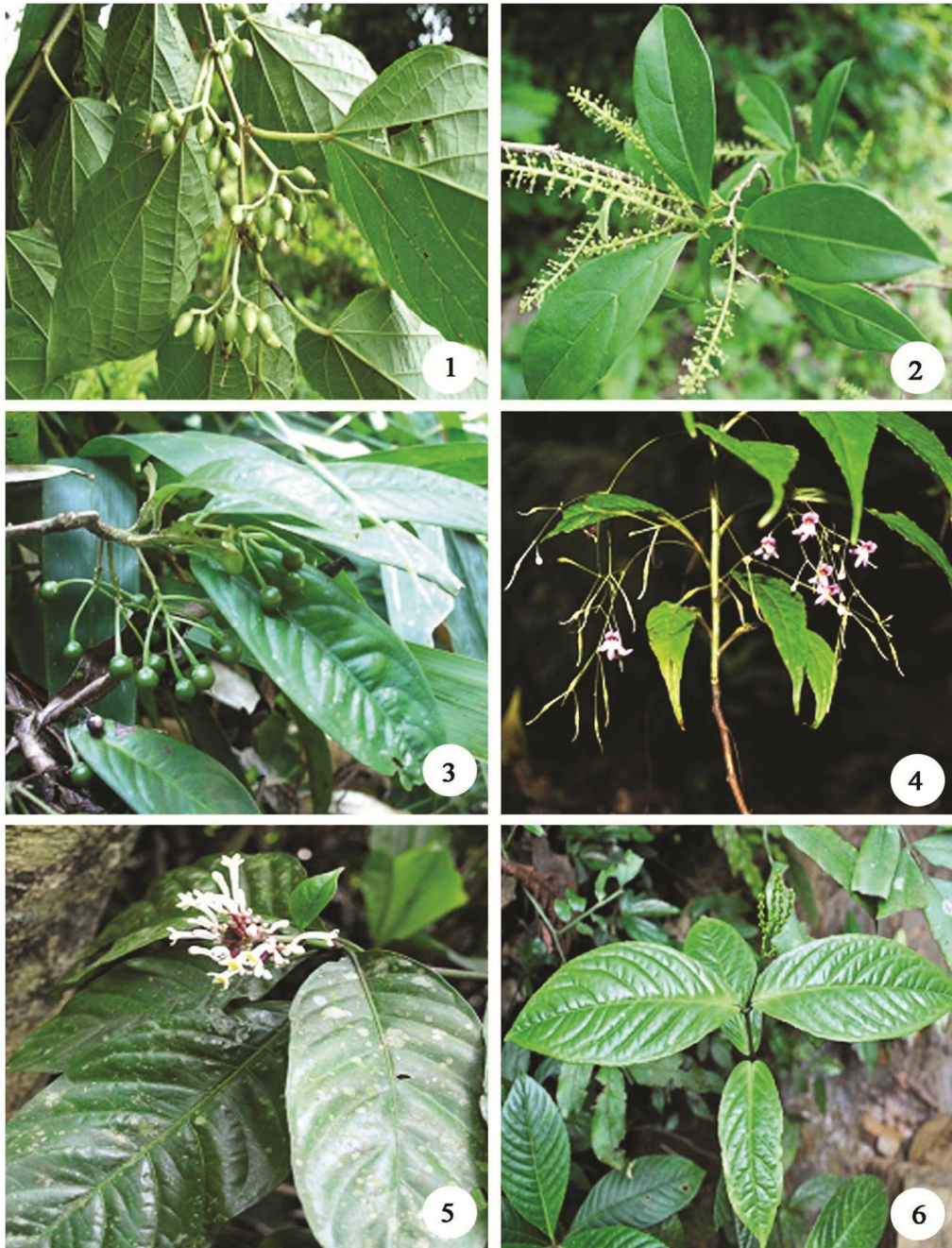
Smilax perfoliata Lour., Fl. Cochinch.: 622. 1790. *Smilax prolifera* Roxb., Fl. Ind. ed. 1832, 3: 795. 1832. LN: *Choto kumarilata*. Evergreen climbers, occasionally occurs in bushy areas and thickets. Fl. & fr.: November-March. Use: Young fruit is eaten as vegetables. RS: KKI-273 (DACB).

DIOSCOREACEAE R.Br.

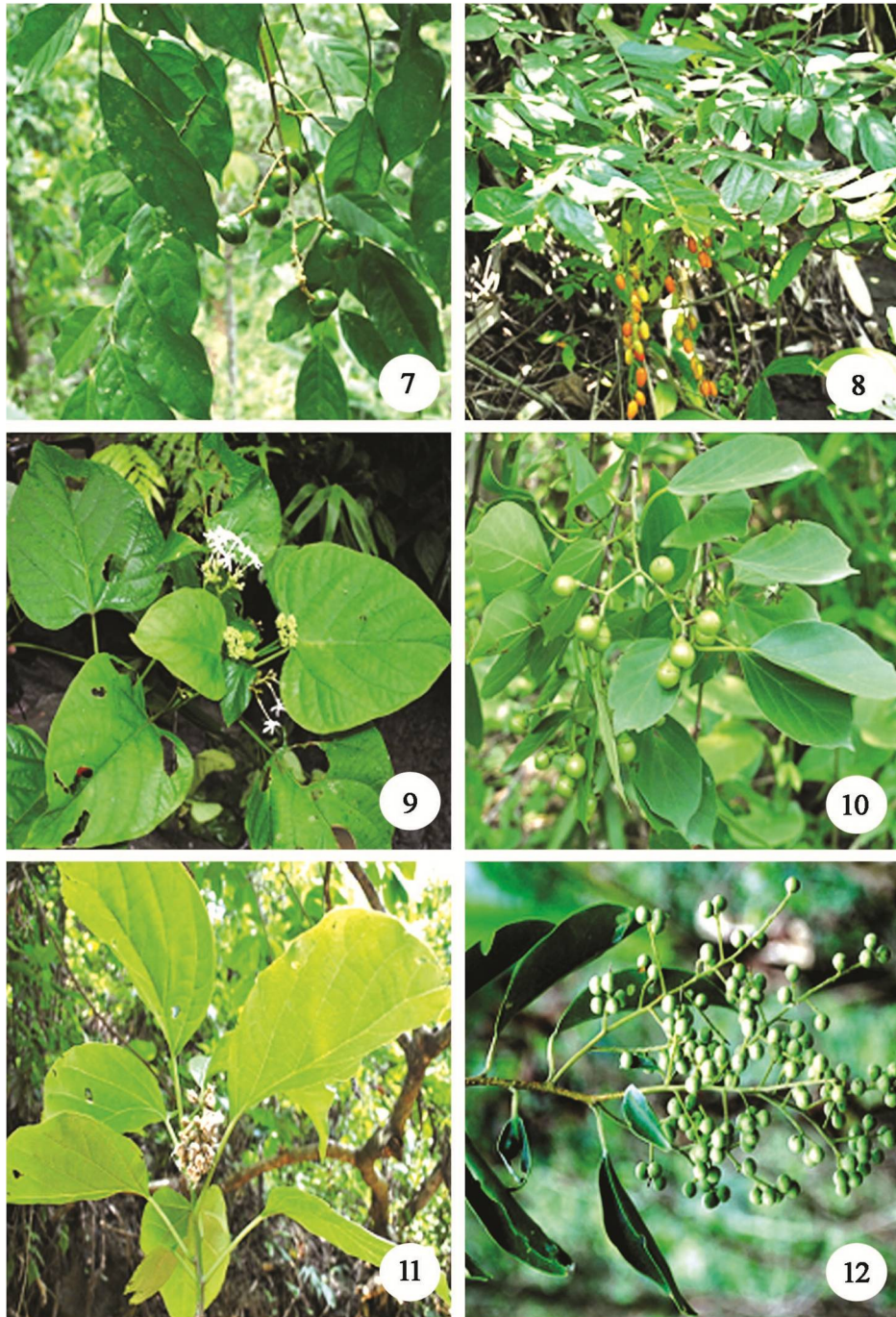
Dioscorea pentaphylla L., Sp. Pl. 2: 1032. 1753. *Dioscorea triphylla* L., Sp. Pl. 2: 1032. 1753. LN: *Jhum Alu*. Evergreen perennial climbers, commonly occurs in scrub forests and forest margins. Fl. & fr.: June-December. Use: Vegetables & Medicine. RS: KKI-268 (DACB).

ORCHIDACEAE A.Juss.

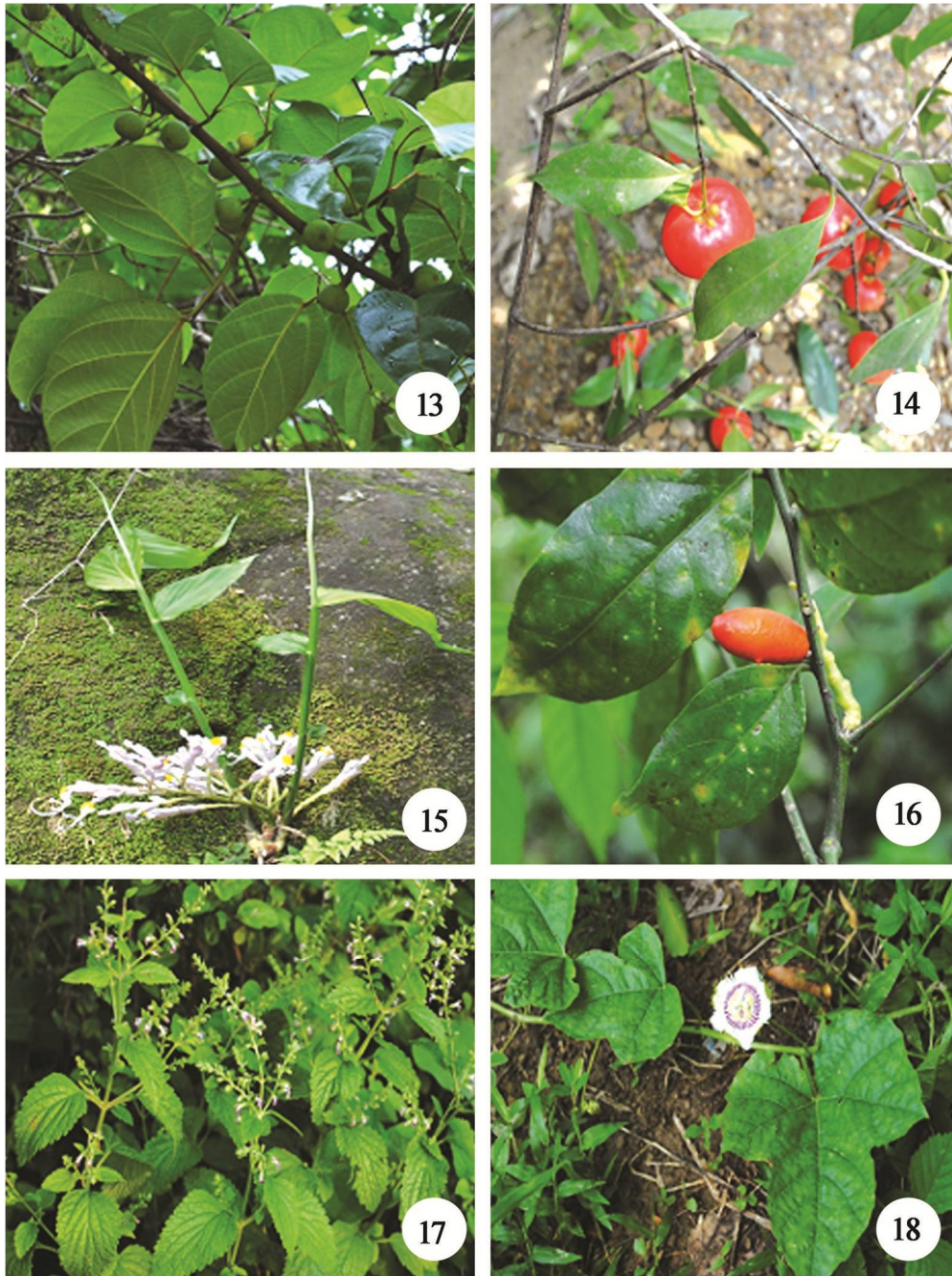
Aerides odorata Lour., Fl. Cochinch. 525. 1790. *Aerides cornuta* Roxb., Fl. Indica 3: 472. 1832. LN: *Porgachha*. Evergreen perennial epiphytic herbs, occasionally occurs on tree trunks. Fl. & fr.: May-June. Use: Medicine. RS: N-5569 (DACB).



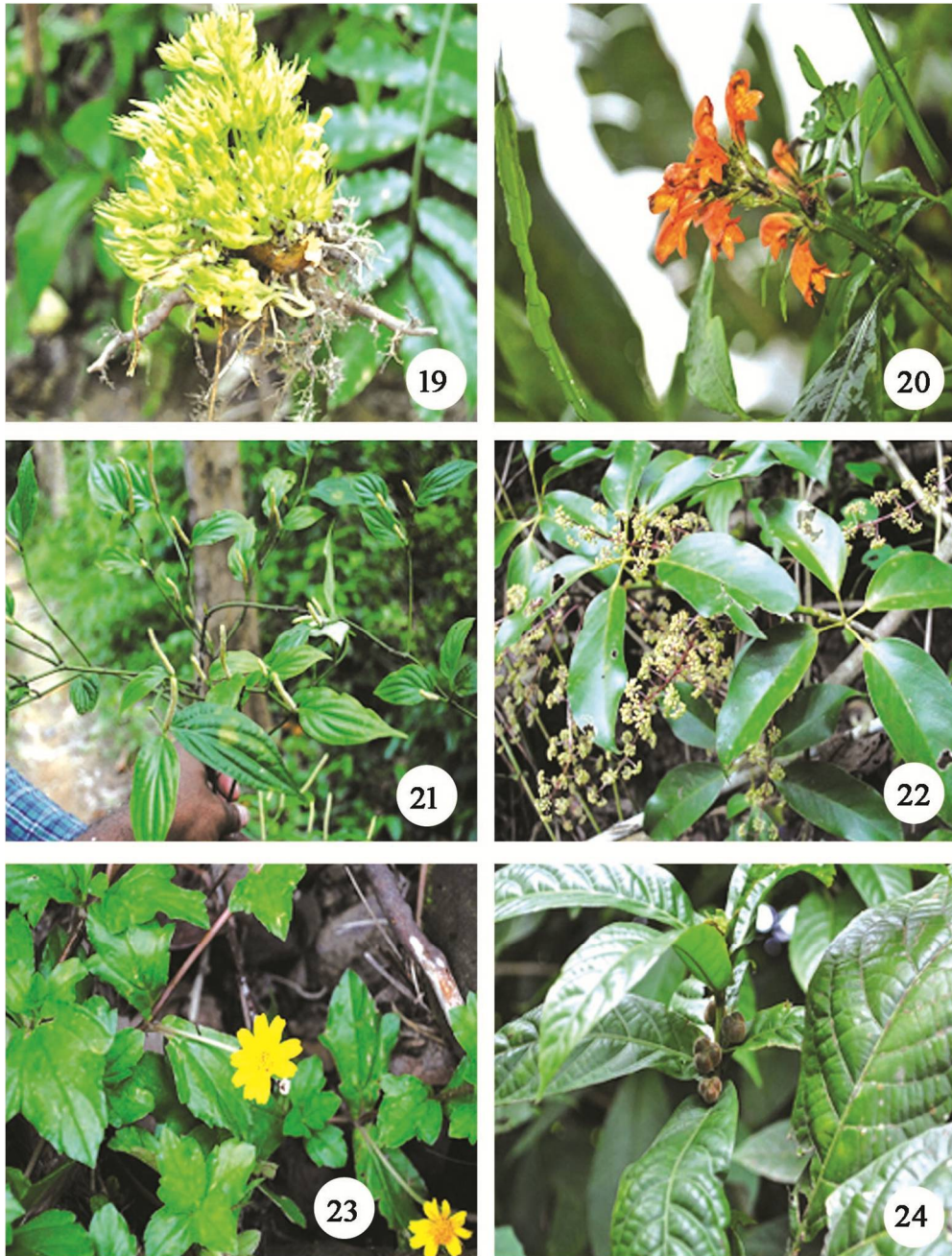
Figs 1-6: 1. *Alangium chinense* (Lour.) Harms; 2. *Antidesma acidum* Retz.; 3. *Ardisia khasiana* C.B.Clarke; 4. *Boeica filiformis* C.B.Clarke; 5. *Chassalia curviflora* (Wall.) Thwaites.; 6. *Chloranthus elatior* Link.



Figs 7-12: 7. *Clausena lansium* (Lour.) Skeels; 8. *Clausena anisata* (Willd.) Hook.f.; 9. *Clerodendrum glandulosum* Lindl.; 10. *Cordia myxa* L.; 11. *Cordia subcordata* Tabl.; 12. *Embelia ribes* Burm. f.



Figs 13-18: 13. *Ficus hederacea* Roxb.; 14. *Garcinia celebica* L.; 15. *Globba spathulata* Roxb.; 16. *Lepionurus sylvestris* Blume; 17. *Mosla dianthera* (Buch.-Ham. ex Roxb.) Maxim.; 18. *Passiflora foetida* L.



Figs 19-24: 19. *Mycetia mukerjiana* Deb & R.M.Dutta; 20. *Phlogacanthus thyriformis* (Roxb. ex Hardw.) Mabb.; 21. *Piper sylvaticum* Roxb.; 22. *Schefflera elliptica* (Blume) Harms.; 23. *Sphagneticola trilobata* (L.) Pruski; 24. *Trigonostemon semperflorens* (Roxb.) Müll. Arg.

Papilionanthe teres (Roxb.) Schltr. in Orchis 9: 78. 1915. *Dendrobium teres* Roxb., Fl. Ind. ed. 1832, 3: 485. 1832. LN: *Paphoteri orchid*. Evergreen perennial epiphytic herbs, rarely occurs on tree trunks in open forests or at forest margins. Fl. & fr.: May-June. Use: Medicine. RS: KKI-259 (DACB).

Rhynchosyilis retusa (L.) Blume, Bijdr.: 286. 1825. LN: *Shial leza pargacha*. Evergreen perennial epiphytic herbs, occasionally occurs on tree trunks in open forests or at forest margins. Fl. & fr.: May-July. Use: Ornamental & Medicine. RS: N-5330 (DACB).

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

Discussion

The present study results in a checklist of flora of Madhabkundo Eco-park which includes 212 species under 193 genera and 84 families. Out of the total species recorded, Pteridophyta comprised 3 species (under 2 families and 3 genera), Liliopsida comprised 37 species (under 14 families and 32 genera) and Magnoliopsida comprised 172 species (under 68 families and 148 genera) (Table 1). The top six species-rich families in this checklist are Rubiaceae with 15 species, Euphorbiaceae with 11 species, Moraceae with 10 species, Urticaceae with 9 species, and Rutaceae & Acanthaceae with 8 species (Table 2). *Ficus* appears as the largest genus representing with 8 species, *Elatostema* with 4 species, then *Diospyros*, *Piper*, *Elaeocarpus* and *Clausena* each with 3 species (Table 2).

Table 1. Taxonomic enumeration of major plant group of the Madhabkundo Eco-park.

| Division | Numbers of family | Numbers of genus | Numbers of species |
|---------------|-------------------|------------------|--------------------|
| Pteridophyta | 2 | 3 | 3 |
| Liliopsida | 14 | 32 | 37 |
| Magnoliopsida | 68 | 148 | 172 |
| Total | 84 | 193 | 212 |

Table 2. Top Six Species-rich Families and Genera

| Top five species-rich families | | Top five species-rich genera | |
|--------------------------------|---------|------------------------------|---------|
| Family | Species | Genus | Species |
| Rubiaceae | 15 | <i>Ficus</i> | 8 |
| Euphorbiaceae | 11 | <i>Elatostema</i> | 4 |
| Moraceae | 10 | <i>Clausena</i> | 3 |
| Urticaceae | 9 | <i>Diospyros</i> | 3 |
| Acanthaceae | 8 | <i>Elaeocarpus</i> | 3 |
| Rutaceae | 8 | <i>Piper</i> | 3 |

Plant species occurring in the study area has been categorized under four broad life forms viz. trees, shrubs, herbs & climbers. Among those life forms, the largest number of species fall under trees (77 species) followed by herbs (68 species), shrub (46 species) and climbers (21 species). Fig. 25 shows that tree species has the highest percentage (36.32%) followed by herb species

(32.08%), shrubs (21.70%), and climbers (9.91%). This analysis shows dominance of both tree and herbaceous taxa over other life forms in the study area. The flora of the study area has been categorized based on leaf-fall (*viz.* evergreen and deciduous). The analysis shows that the number of evergreen species is 182 and that of deciduous is 30 only. The percentage of evergreen species is over 85 % and that of deciduous species is below 15%. From this analysis, it can be clearly shown that evergreen species is strongly dominated over the deciduous ones. The study reveals that 4 plant species are very common; 60 species are common (including 15 cultivated species); 78 plant species are occasional and 70 species are rare (Fig. 26).

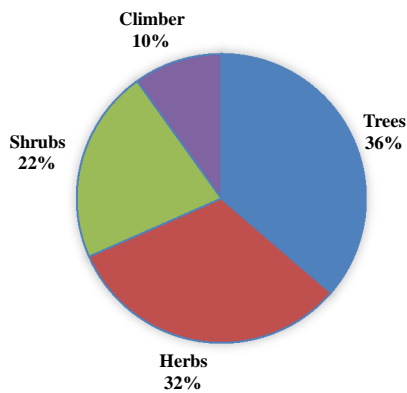


Fig. 25. Pie chart showing life forms.

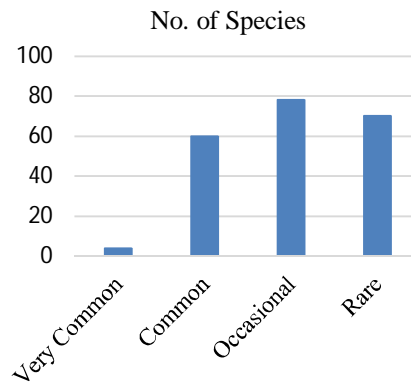


Fig. 26. Collum showing rarity of plant species

Native people around Madhabkundo Eco-park, mainly the Khasia tribe, traditionally grow betel vine, betel nut, cashew nut, pineapple, lemon etc. for their livelihood and medicinal uses. The study has revealed economically important plant species also. The result shows that out of 217 plant species, 95 species used as medicinal plants, 25 used as a source of firewood, 24 used as edible fruits, 18 used as timber, 15 used as vegetables, 12 used as fiber, 8 supports the wildlife, 7 used as fodder, 7 has ornamental value, 4 used as sources of oil, 4 used as flavouring agent and 9 species uses for other purposes (Fig. 27).

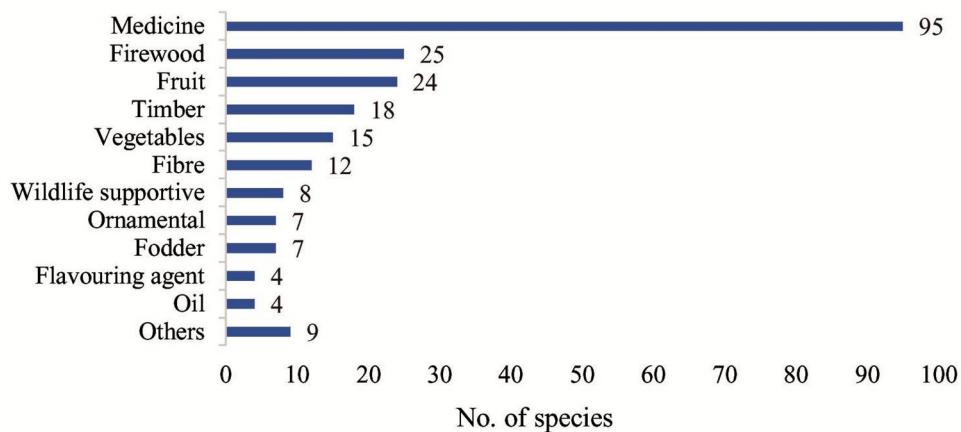


Fig. 27. Bar diagram showing the divers uses of the plant species.

During this fieldwork, a numbers of plant species have been collected from the study areas, among them steric marked 4 species (see Table 3) were discovered as new records for Bangladesh from the area by Uddin *et al.* (2015). The study has revealed 5 plant species [*viz.* *Clausena lansium* (Lour.) Skeels, *Cordia subcordata* Tabl., *Euonymus laxiflorus* Champ., *Mycetia mukerjiana* Deb & R.M.Dutta, *Trigonostemon viridissimus* (Kurz) Airy Shaw] occurring in the park area those are not found elsewhere in the country. The population of each species are also very few in number. These locally endemic plant species needs especial care for future conservation.

Table 3. Newly recorded Plant Species for Bangladesh from the park.

| New records species | Family | Life form | Mature individuals |
|---|---------------|-----------|--------------------|
| * <i>Clausena lansium</i> (Lour.) Skeels | Rutaceae | Tree | 1-4 |
| * <i>Cordia subcordata</i> Tabl. | Boraginaceae | Shrub | 1-4 |
| <i>Euonymus laxiflorus</i> Champ. | Celastraceae | Shrub | 5-24 |
| * <i>Mycetia mukerjiana</i> Deb & R. M.Dutta | Rubiaceae | Tree | 1-4 |
| * <i>Trigonostemon viridissimus</i> Airy Shaw | Euphorbiaceae | Shrub | >100 |

Based on the present floristic study it can be easily said that the park flora has emence ecological, economical and scientific values. The present study of the park will enhance the knowledge on plant diversity of the area, which can be used for better management and conservation of biodiversity.

Acknowledgements

The authors gratefully acknowledge the Ministry of Environment, Forest and Climate Change, Government of the People's Republic of Bangladesh for giving financial support for the field survey. Special thanks to the authority of the Bangladesh Forest Department for their co-operation during the field works.

References

- Ahmed, Z.U., Begum, Z.N.T., Hassan, M.A., Khondker, M., Kabir, S.M.H., Ahmed, M., Ahmed, A.T.A., Rahman, A.K.T. & Haque, E.U. (eds.). 2008. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 6. Asiatic Society of Bangladesh, Dhaka. pp. 1-408.
- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmed, M., Ahmed, A.T.A., Rahman, A.K.T. & Haque, E.U. (eds.). 2008a. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 7. Asiatic Society of Bangladesh, Dhaka. pp. 1-546.
- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmed, M., Ahmed, A.T.A. & Rahman, A.K.T. (eds.). 2008b. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 8. Asiatic Society of Bangladesh, Dhaka. pp. 1-478.
- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmed, M. & Ahmed, A.T.A. (eds.). 2009. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 9. Asiatic Society of Bangladesh, Dhaka. pp. 1-488.
- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmed, M. & Ahmed, A.T.A. (eds.). 2009a. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 10. Asiatic Society of Bangladesh, Dhaka. pp. 1-580.
- Ahmed, Z.U., Hassan, M.A., Begum, Z.N.T., Khondker, M., Kabir, S.M.H., Ahmed, M., Ahmed, A.T.A., Rahman, A.K.T. & Haque, E.U. (eds.). 2008c. *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 12. Asiatic Society of Bangladesh, Dhaka. pp. 1-552.

- Alam, M.K. 1988. Annotated Checklist of the Woody Flora of Sylhet Forest. Bull. 5. *Plant Taxonomy Series*, Bangladesh Forest Research Institute, Chittagong. pp. 1-153.
- Alam, M.K. 1998. Documentation of Ethnobiological Information. In: Banik, R.L., Alam, M.K., Peil, S. and Rastogi, A. (eds.). *Applied Ethnobotany*. Bangladesh Forest Research Institute, Chittagong. pp. 28-29.
- Arefin, M.K., Rahman, M.M., Uddin, M.Z. and Hassan, M.A. 2011. Angiosperm Flora of Satchari National Park, Habiganj, Bangladesh. *Bangladesh J. Plant Taxon.* **18**(2): 117-140.
- Brandis, D. 1906. (Repr. 1984). *Indian Trees: An account of trees, shrubs, woody climbers, bamboos, and palms indigenous or commonly cultivated in the British Indian Empire*. London: A. Constable & Co. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.
- Cronquist, A. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York, pp. 1-1262.
- Das, D.K. and Alam, M.K. 2001. *Trees of Bangladesh*. Bangladesh Forest Research Institute, Chittagong. pp. 1-342.
- Filgueiras, T.S., Brochado, A.L., Nogueira P.E. and Guala, G.F. 1994. Walking-An *ex pedito* method for floristic and qualitative surveys. *IBGE 12 Geosciences Notebook*: 39-43.
- Haque, A.K.M.K., Khan, S.A., Uddin, S.N. and Shetu, S.S. 2018. An Annotated Checklist of the Angiospermic Flora of Rajkandi Reserve Forest of Moulvibazar. *Bangladesh. Bangladesh J. Plant Taxon.* **25**: 187-207.
- Hasan, M.M., Hossain, S.A., Ali, A.M. and Alamgir, A.N.M. 2014. Medicinal Plant Diversity in Chittagong, Bangladesh: A Database of 100 Medicinal Plant. *Journal of Scientific and Innovative research* **3**(5): 500-514.
- Hooker, J. D. 1872-1897. *The Flora of British India*. Vol. 1-7. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.
- Hossain, G.M. and Hossain, A.E. 2016. Effect of exotic tree plantation on floristic composition and phytodiversity of Rema-Kalenga wildlife sanctuary, Bangladesh. *Jahangirnagar Univ. J. Bio. Sci.* **3**(2): 33-47.
- Huq, A.M., 1986. *Plant Names of Bangladesh*. Bangladesh National Herbarium (BARC), Dhanmondi, Dhaka. pp. 1-289.
- Huq, A. M. 2019. *Plant Names of Bangladesh*. Ashrafia Boi Ghar, Dhaka. pp. 1-599.
- Ibrahim, R., Kamal, G.M., Rahman, M.M, Sultana, S., Pasha, A.H., Mondol, S.R., Alam, M.S. and Dey, A.K. (eds.). 2012. *Community Report Moulvibazar Zilla*. Bangladesh Bureau of Statistics, Dhaka. p. 16.
- IPNI 2008. The International Plant Names Index. <www.ipni.org>. Retrieved on different times from 2021-2022.
- Kanjilal, U.N., Kanjilal, P.C. and Das, A. 1938 (Rep. 1982). *Flora of Assam*. Vol. **1**. A Von Book Company, Delhi, India. pp. 266-267.
- Kramer, K.U., Green, P.S. and Kubitzki, K. 1990. *The Families and Genera of Vascular Plants (Pteridophytes and gymnosperms)*. Vol. **1**. Springer-Verlag, Berlin.
- Kurz, S. 1877 (Rep. 1974). *Forest Flora of British Burma*. Vol. **1 & 2**. Bishen Singh Mahendra Pal Singh and Periodical Experts, India.
- Pasha, M.K. and Uddin, S.B. 2019. Minor Edible Fruits of Bangladesh. *Bangladesh J. Plant Taxon.* **26**(2): 299-313.
- Pasha, M.K. and Uddin, S.B. 2013. *Dictionary of Plant Names of Bangladesh (Vascular Plants)*. Janokalyan Prokashani, Chittagong, Bangladesh. pp. 1-434.
- Prain, D. 1903. *Bengal Plants*. Vol. 1 & 2 (Ind. repr. 1981). Bishen Singh Mahendra Pal Singh, Dehra Dun, India.
- Rahman, N., Islam, K.K. and Uddin, S.N. 2018. Discovery of Three Angiosperm New Records for Bangladesh from Moulvibazar District. *Bull. Bangladesh National Herb.* **6**: 89-95.
- Rahman, N., Sarker, A.A. and Uddin, S.N. 2018. One Hundred and Three New Additions to the Angiosperm Flora of Lawachara National Park, Bangladesh. *Bull. Bangladesh National Herb.* **6**: 71-88.

- Sobuj, N.A. and Rahman, M. 2011. Assessment of Plant Diversity in Khadimnagar National Park of Bangladesh. *International Journal of Environmental Sciences*. **2**(1): 79-91.
- The Plant List, 2013. *The Plant List, a working list of all plant species*. Version 1.1 <<http://www.the-plantlist.org>> Rtrived on 05 January 2022.
- TROPICOS 2010. Missouri Botanical Garden. <<http://www.tropicos.org>> Missouri Botanical Garden, Saint Louis, Missouri, USA. Retrieved on 11 March 2020.
- Uddin, M.Z., Hassan, M.A. and Khan, M.S. 2003. An Annotated Checklist of Angiospermic Flora of Rema-Kalenga Wildlife Sanctuary (Habiganj) in Bangladesh-11a. Magnoliopsida (Dicots). *Bangladesh J. plant Taxon*. **10**(1): 79-94.
- Uddin, M.Z., Hassan, M.A. and Khan, M.S. 2002. An Annotated Checklist of Angiospermic Flora of Rema-Kalenga Wildlife Sanctuary (Habiganj) in Bangladesh-1. Liliopsida (Monocots). *Bangladesh J. Plant Taxon*. **9**(2): 57-66.
- Uddin, M.Z., Khan, M.S. and Hassan, M.A. 2001. Ethno-medical Plants Records of Kalenga Forest Range (Habiganj), Bangladesh for Malaria, Jaundice, Diarrhea and Dysentery. *Bangladesh J. Plant Taxon*. **8**(1): 101-104.
- Uddin, M.Z., Rahman M.M. and Arefin, M.K. 2011. *Lawachara National Park: Studies on the Angiospermic Flora of Lawachara National Park*. LAP Lambert, Academic Publishers, Germany. pp. 1-147.
- Uddin, M.Z. 2015. *Plant Diversity Assessment in Khadimnagar National Park, Sylhet*. 10.13140/RG.2.2.11459.91682.
- Uddin, M.Z., and Hassan, M.A. 2010. Angiosperm Diversity of Lawachara National Park (Bangladesh): a Preliminary Assessment. *Bangladesh J. Plant Taxon*. **17**(1): 9-22.
- Uddin, S.N. 2006. In: Rahman, M.M. *Traditional Uses of the Ethno-medicinal Plants of the Chittagong Hill Tracts*. Bangladesh National Herbarium, Dhaka. pp. 1-992.
- Uddin, S.N., Khokan, M.E.H., Khan, and Islam, K.K.I. 2015. Discovery of Three New Angiosperm Records for Bangladesh from Juri Forest Range-1 under Moulvibazar district. *Bull. Bangladesh National Herb*. **4**: 95-102.
- Uddin, S.N. and Hassan, M.A. (eds.). 2018. *Vascular Flora of Chittagong and the Chittagong Hill Tracts*. Vol. 1-3. Bangladesh National Herbarium.
- Uddin, S.N., Khan, B. and Khokan, M.E.H. 2015. Discovery of Four Angiosperm New Records for Bangladesh from Madhabkundo Eco-park under Moulvibazar district. *Bull. Bangladesh National Herb*. **4**: 77-85.
- Uddin, M.Z. and Hassan, M.A. 2004. Flora of Rema-Kalenga Wildlife Sanctuary. IUCN Bangladesh Country Office, Dhaka, Bangladesh. p.120
- Wu, C.Y., Raven, P.H. and Hong, D.Y. (eds.). 1995-2013. *Flora of China*. Vol. 2-25. Science Press and Missouri Botanical Garden Press, Beijing and St. Louis.
- Yusuf, M. Begum, J., Hoque, M.N and Choudhury, J.U. 2009. *Medicinal plants of Bangladesh- Revised and Enlarged*. Bangladesh Council for Scientific and Industrial Research Laboratories Chittagong, Chittagong-4220, Bangladesh. pp. 1-794.