

ASSESSMENT OF ANGIOSPERM FLORA AT DUPCHACHIA UPAZILA OF BOGURA DISTRICT, BANGLADESH FOCUSING ON IMPORTANT MEDICINAL PLANTS.

Abstract:

A comprehensive floristic study was conducted to assess angiosperm diversity in Dupchanchia Upazila of Bogura District, Bangladesh, over a one-year period spanning December 2024 to December 2025. Repeated field visits and specimen collection recorded 202 species, representing 157 genera across 64 families. Habit analysis showed that herbs were the most abundant with 87 species (43.07%), followed by trees (54 species; 26.73%), shrubs (39 species; 19.31%), and climbers (22 species; 10.89%). Family composition showed clear dominance of certain angiosperm families. Asteraceae was the leading family with 18 species. Other well-represented families included Fabaceae, Cucurbitaceae, Amaranthaceae, Apocynaceae, Solanaceae, Poaceae, Moraceae, Brassicaceae, and Malvaceae represented by 18, 16, 13, 11, 9, 8, 7, 7, 6, and 6 species. Species occurrence indicated that 51 species (25.25%) were very common, 136 species (67.33%) were common, 14 species (6.93%) were rare, and one species (0.49%) was very rare. Of the total flora, 69 species (34.16%) were wild, while 133 species (65.84%) were planted. Several species have medicinal importance and are used locally in healthcare practices. Botanical and local names, family, habit, type, abundance, and voucher number were recorded, providing baseline data for conservation and sustainable utilization of angiosperm resources.

Introduction:-

Angiosperms are vascular seed plants in which the ovule develops into a seed within a closed ovary. The ovary is typically contained in a flower, the reproductive structure of the plant, which may house male, female and bisexual reproductive organs. Angiosperms, or flowering plants, produce seeds enclosed within fruits and form the most diverse group of plants. The term “angiosperm” means “vessel seed,” highlighting the protective fruit around the seeds. Angiosperms play a vital role in ecosystem stability and biodiversity. They form the base of many food chains, produce oxygen, and provide habitats for numerous organisms. In Bangladesh, these plants are essential for human life, supplying food, medicine, timber, fiber, and ornamental resources. Their diversity, specialized flowers, and efficient reproductive strategies make them ecologically dominant and economically valuable. Magnoliophyta (Angiospermae) is the most diverse group of vascular plants, with about 416 families, 64 orders, over 13,000 genera, and nearly 300,000 species globally [7].

Angiosperms are the main contributors to the human food supply because they provide most of the fruits, vegetables, grains, pulses, and leafy foods consumed worldwide. Edible fruits such as *Mangifera indica* (mango), *Musa paradisiaca* (banana), *Carica papaya* (papaya), *Psidium guajava* (guava), and Citrus species are commonly eaten for their nutritional value. Many vegetables, including *Solanum lycopersicum* (tomato), *Solanum tuberosum* (potato), *Solanum melongena* (brinjal), *Cucumis sativus* (cucumber), and *Cucurbita maxima* (pumpkin), are obtained from angiosperm plants. Staple cereals such as *Oryza sativa* (rice), *Triticum aestivum* (wheat), and *Zeamays* (maize) form the basic diet of millions of people. Pulses and legumes like *Cicer arietinum* (chickpea), *Lens culinaris* (lentil), and *Vigna radiata* (mung bean), along with leafy vegetables such as *Spinacia oleracea* (spinach), *Amaranthus species*, and *Moringa oleifera*, further highlight the importance of angiosperms as essential food sources.

Angiosperms have long been used as an important source of medicines in both traditional and modern healthcare systems. Many flowering plants possess therapeutic properties and are widely used to treat different diseases. *Ocimum sanctum* (tulsi) is commonly used to relieve cough, cold, and fever, while *Azadirachta indica* (neem) is known for its effectiveness against skin disorders, infections, and fever. *Aloe vera* is valued for healing burns, wounds, and skin problems. *Zingiber officinale* (ginger) is used to improve digestion and reduce nausea, and *Curcuma longa* (turmeric) is applied for its anti-inflammatory and antiseptic properties. *Allium sativum* (garlic) is used to control blood pressure and improve heart health. Plants such as *Rauvolfia serpentina* are important for treating hypertension, while *Withania somnifera* (ashwagandha) is used as a tonic to reduce stress and weakness. Thus, angiosperms play a vital role in providing natural medicines for human health.

Angiosperms are an important source of raw materials for the pharmaceutical industry, as many flowering plants produce biologically active compounds used in modern drug preparation. Several life-saving medicines are derived directly or indirectly from angiosperms. *Cinchona officinalis* is the source of quinine, which is used in the treatment of malaria. *Papaver somniferum* provides alkaloids such as morphine and codeine that are widely used as pain-relieving drugs. Cardiac medicines like digoxin are obtained from *Digitalis purpurea* and are essential in the treatment of heart diseases. *Atropa belladonna* yields atropine, which is used in ophthalmology and as an antidote in poisoning cases. Moreover, *Catharanthus roseus* supplies anticancer compounds such as vincristine and vinblastine. These examples demonstrate the crucial role of angiosperms in the development and production of pharmaceutical drugs [18].

Angiospermic flora was carried out in Bangladesh by [2], [11], [13-16], [19], [22-40], [41-45], [46-50] and [51-55]. The aim of the present research was to explore and assess the diversity and

66 medicinal uses of angiosperms in Dupchanchia upazila of Bogura district, Bangladesh.

68 **Materials and Methods:-**

69 **Study area:** Dhupchanchia Upazila is an upazila of Bogra District in the Division of Rajshahi,
70 Bangladesh. Dhupchanchia Thana was established in 1880 and was converted into an upazila in 1983. It
71 is named after its administrative center, the town of Dhupchanchia. Dhupchanchia Upazila has a total
72 area of 162.44 square kilometres (62.72 sq mi). It is bounded on the east by the Nagar River
73 (across which lies Kahaloo Upazila). It borders Adamdighi Upazila to the south and west,
74 Joypurhat District to the west and north, and Shibganj Upazila to the northeast [5].

75 **Methodology:** The research is based on fresh materials collected during fifteen field visits to
76 Dupchanchia upazila of Bogura district, Bangladesh from July 2024 to December 2025 to cover
77 the seasonal variations. The visits covered all types' of habitats, slope, village grove, fruit
78 gardens, fallow lands, crop fields, roadsides of the study area. Plant parts with either flowers or
79 fruits were collected using traditional herbarium techniques to make voucher specimens for
80 documentation. Medicinal information was obtained through semi-structured interviews with
81 knowledgeable traditional healers. A total of 68 informants having an age range of 27-76 years
82 were interviewed using the semi-structured interviewed method [3]. Plant parts with either
83 flowers or fruits collected using traditional herbarium techniques to make voucher specimens for
84 documentation and voucher specimens have been preserved at Herbarium of Rajshahi
85 University.

86 **Identification:** Collected angiosperms were identified with the help of various literature [1], [10],
87 [17] and [20]. For the current name and up-to-date nomenclature [12] and [21] were also
88 consulted.

90 **Results and Discussion:-**

91 Assessment of angiosperm flora of Dupchanchia Upazila in Bogura District, Bangladesh, was carried out
92 over a twelve-month period from December 2024 to December 2025. Field exploration and specimen
93 examination resulted in the documentation of 202 flowering plant species belonging to 64 different
94 families. The floristic composition was largely dominated by Magnoliopsida (dicotyledons), which

accounted for 176 species distributed among 53 families. In contrast, Liliopsida (monocotyledons) showed comparatively lower representation, comprising 26 species under 11 families. Among the dicotyledonous families, Asteraceae exhibited the highest species richness with 18% species, followed by Fabaceae (16% species), Cucurbitaceae (13% species), Amaranthaceae (11% species), Apocynaceae (9% species), Solanaceae (8% species). Other notable families included, Moraceae represented by 7% species. Brassicaceae and Malvaceae are represented by 6% species each. Within the monocotyledons, Poaceae and Arecaceae emerged as the most prominent families. Contributing Poaceae 7% species and Arecaceae 4% species (Table 7; Figure 4). For the 202 angiosperm species recorded during this study, detailed information was compiled, including their scientific and local names, family, habit, type, abundance, phenology, and voucher specimen numbers. The growth-form assessment of the recorded angiosperms revealed considerable variation in life habits across the study area. Herbaceous species formed the largest component of the flora, represented by 87 species, while shrubs and trees were represented by 39 and 54 species, respectively. Climbers constituted the smallest group with 22 species. In terms of relative abundance, herbs accounted for approximately (43.07%) of the total species, followed by trees (26.73%), shrubs (19.31%), and climbers (10.89%) (Table 4; Figure 1).

The distribution status of each recorded species was assessed only to indicate its occurrence within the study area and was determined through visual estimation during field observations. Species that were found widely and occurring throughout the area were categorized as abundant. Species observed repeatedly but restricted to specific locations were considered frequent. In contrast, species represented by a very limited number of individuals were classified as rare. Out of the recorded species, 51 (25.25%) very common species, 136 (67.33%) common, 14 (6.93%) rare and 1 (0.49%) very rare (Table 5; Figure 2). Out of the species recorded, 69 species (34.16%) were wild, while 133 species (65.84%) were cultivated or planted (Table 6; Figure 3).

Observed herb species (Table 2): *Amaranthus spinosus*, *Amaranthus viridis*, *Achyranthes aspera*, *Amaranthus tricolor*, *Alternanthera sessilis*, *Aerva sanguinolenta*, *Amaranthus dubius*, *Andrographis paniculata*, *Asclepias curassavica*, *Ageratum conyzoides*, *Acmella paniculata*, *Arachis hypogaea*, *Aloe vera*, *Allium cepa*, *Allium sativum*, *Alocasia macrorrhizos*, *Amorphophallus campanulatus*, *Brassica napus*, *Bacopa monnieri*, *Beta vulgaris*, *Blumea lacera*, *Brassica rapa* var. *rapa*, *Brassica oleracea* var. *italica*, *Boerhavia diffusa*, *Brassica oleracea* L. Var. *Botrydis*, *Brassica oleracea* L. Var. *Capitata*, *Coriandrum sativum*, *Catharanthus roseus*, *Chrysanthemum coronarium*, *Cleosia argentea*, *Curcuma longa*, *Chenopodium album*, *Colocasia esculenta*, *Capsicum annuum*, *Cynodon dactylon*, *Cyperus esculentus*, *Commelina benghalensis*, *Cyanthillium cinereum*, *Calendula officinalis*, *Centella asiatica*, *Dahlia pinnata*, *Daucus carota*, *Euphorbia hirta*, *Eclipta alba*, *Enhydra fluctuans*, *Eichhornia crassipes*,

128 *Fragaria vesca*, *Helianthus annuus*, *Heliotropium indicum*, *Hydrocotyle vulgaris*, *Kalanchoe pinnata*,
129 *Lemna perpusilla*, *Leucas aspera*, *Lens culinaris*, *Lactuca sativa*, *Mimosa pudica*, *Mikania cordata*,
130 *Mirabilis jalapa*, *Mentha spicata*, *Nelumbo nucifera*, *Nymphaea nouchali*, *Ourea lanata*, *Oxalis*
131 *corniculata*, *Oryza sativa*, *Portulaca oleracea*, *Peperomia pellucida*, *Portulaca grandiflora*, *Pisum*
132 *sativum*, *Raphanus sativus*, *Physalis minima*, *Sida cordifolia*, *Setaria glauca*, *Solanum surattense*,
133 *Sonchus arvensis*, *Saccharum spontaneum*, *Solanum lycopersicum*, *Saccharum officinarum*, *Solanum*
134 *tuberosum*, *Tradescantia spathacea*, *Tridax procumbens*, *Trapa bispinosa*, *Tagetes patula*, *Wedelia*
135 *trilobata*, *Xanthium indicum*, *Zinnia elegans*, *Zea mays*, *Zingiber officinale*.

136 Observed shrub species (Table 2): *Abroma augustum*, *Bougainvillea spectabilis*, *Bambusa vulgaris*,
137 *Corchorus capsularis*, *Carissa carandas*, *Calotropis procera*, *Clerodendrum viscosum*, *Cestrum*
138 *nocturnum*, *Datura metel*, *Euphorbia tirucalli*, *Euphorbia pulcherrima*, *Euphorbia milii*, *Guilandina*
139 *bonduc*, *Gardenia jasminoides*, *Hibiscus mutabilis*, *Hibiscus rosa-sinensis*, *Ipomoea carnea*, *Ixora*
140 *coccinea*, *Jasminum sambac*, *Justicia adhatoda*, *Lantana camara*, *Lawsonia inermis*, *Malvaviscus*
141 *arboreus*, *Musa paradisiaca*, *Murraya paniculata*, *Nyctanthes arbor-tristis*, *Nerium oleander*, *Ocimum*
142 *sanctum*, *Punica granatum*, *Rauvolfia serpentina*, *Ricinus communis*, *Rosa centifolia*, *Solanum*
143 *melongena*, *Senna sophora*, *Tabernaemontana divaricata*, *Thevetia peruviana*, *Tecoma stans*, *Vitex*
144 *negundo*, *Ziziphus oenoplia*.

145 Observed tree species (Table 2) : *Annona squamosa*, *Albizia lebbek*, *Acacia nilotica*, *Artocarpus*
146 *heterophyllus*, *Artocarpus lacucha*, *Azadirachta indica*, *Averrhoa carambola*, *Anthocephalus chinensis*,
147 *Areca catechu*, *Aegle marmelos*, *Borassus flabellifer*, *Bombax ceiba*, *Citrus aurantifolia*, *Carica papaya*,
148 *Cinnamomum tamala*, *Citrus maxima*, *Cinnamomum Verum*, *Citrus reticulata* Blanco, *Cocos nucifera*,
149 *Diospyros malabarica*, *Dalbergia sissoo*, *Dillenia indica*, *Delonix regia*, *Elaeocarpus robustus*,
150 *Eucalyptus tereticornis*, *Ficus hispida*, *Ficus benghalensis*, *Ficus religiosa*, *Ficus racemosa*, *Gossypium*
151 *harbaceum*, *Leucaena leucocephala*, *Litchi chinensis*, *Mangifera indica*, *Morus indica*, *Moringa oleifera*,
152 *Melia azedarach*, *Manilkara zapota*, *Mimusops elengi*, *Phoenix dactylifera*, *Phyllanthus emblica*,
153 *Phyllanthus acidus*, *Psidium guajava*, *Plumeria rubra*, *Polyalthia longifolia*, *Swietenia mahagoni*,
154 *Syzygium cumini*, *Samanea saman*, *Spondias pinnata*, *Syzygium samarangense*, *Terminalia arjuna*, *Trema*
155 *orientale*, *Terminalia chebula*, *Tamarindus indica*, *Ziziphus mauritiana*. Observed climber species (Table
156 6): *Basella alba*, *Benincasa hispida*, *Citrullus lanatus*, *Clitoria ternatea*, *Coccinia grandis*, *Cucumis*
157 *melo*, *Cucumis sativus*, *Cucurbita maxima*, *Cuscuta reflexa*, *Ipomoea aquatica*, *Ipomoea batatas*, *Lablab*
158 *purpureus*, *Lagenaria siceraria*, *Luffa acutangula*, *Luffa cylindrica*, *Momordica charantia*, *Momordica*
159 *dioica*, *Selenicereus undatus*, *Trichosanthes anguina*, *Trichosanthes dioica*, *Vitis vinifera*, *Vigna sinensis*.

A preliminary survey of angiosperm diversity was carried out in Dupchanchia Upazila of Bogura District, Bangladesh, between December 2024 and December 2025. During this period, 202 species representing 64 families were collected and systematically analyzed (Table 1). The composition of families observed in this study aligns closely with findings from floristic surveys conducted in other districts of Bangladesh, suggesting that the diversity patterns in Dupchanchia Upazila are comparable to those reported in other regions. This information not only provides a baseline record for the local flora but also highlights the relative representation of different plant families, offering a foundation for future ecological and conservation studies in the area.

The variation in species richness among different families suggests a wide range of habitats and ecological conditions in Dupchanchia Upazila. The findings of the present investigation are comparable with floristic studies conducted in other regions of Bangladesh and provide baseline information on the angiosperm diversity of Dupchanchia upazila, where comprehensive floristic documentation has been limited. About 245 species belonging to 195 genera under 95 families were recorded in Khagrachhari district [13]. About 374 species belonging to 264 genera under 84 families were recorded in Lawachara National Park [54]. About 153 species belonging to 120 genera under 52 families were recorded in Runtia sal forest [52]. A total of 245 species under 183 genera and 72 families were documented in Habiganj district [2]. About 425 species belonging to 321 genera and 108 families were recorded in the Rajshahi district [41]. About 302 species belonging to 243 genera and 84 families were recorded in the Bangladesh police Academy, Rajshahi [34]. No published information recorded on the diversity of angiosperm flora at Dupchanchia Upazila, Bogura district, Bangladesh. This study involved the collection of significant medicinal angiosperms from Dupchanchia Upazila, Bogura district. 65 medicinal plant species were documented, along with their therapeutic applications, which are traditionally employed by local people for the treatment of various health conditions (Table 3). Identification of common medicinal plants in the study is in agreement with Anisuzzaman *et al.* [4]; Ghani [9], Chakma *et al.* [6], Faruque and Uddin [8], and Yusuf *et al.* [56].

Table 1: The families of the plant species recorded

Sl.No.	Family	No. of Herb Species	No. of Shrub Species	No. of Climber Species	No. of Tree Species
01.	Amaranthaceae	11	-	-	-
02.	Acanthaceae	1	1	-	-
03.	Anacardiaceae	-	-	-	2

04.	Apiaceae	3	-	-	-
05.	Annonaceae	-	-	-	2
06.	Apocynaceae	2	6	-	1
07.	Asteraceae	18	-	-	-
08.	Bombacaceae	-	-	-	1
09.	Tiliaceae	-	1	-	-
10.	Bignoniaceae	-	1	-	-
11.	Nymphaeaceae	1	-	-	-
12.	Scrophulariaceae	1	-	-	-
13.	Ebenaceae	-	-	-	1
14.	Nelumbonaceae	1	-	-	-
15.	Elaeocarpaceae	-	-	-	1
16.	Trapaceae	1	-	-	-
17.	Brassicaceae	6	-	-	-
18.	Cactaceae	-	-	1	-
19.	Cannabaceae	-	-	-	1
20.	Convolvulaceae	-	1	3	-
21.	Combretaceae	-	-	-	2
22.	Cucurbitaceae	-	-	13	-
23.	Basellaceae	-	-	1	-
24.	Caricaceae	-	-	-	1
25.	Crassulaceae	1	-	-	-
26.	Boraginaceae	1	-	-	-
27.	Dilleniaceae	-	-	-	1
28.	Euphorbiaceae	1	4	-	-
29.	Fabaceae	4	2	3	7

30.	Lamiaceae	2	2	-	-
31.	Lauraceae	-	-	-	2
32.	Lythraceae	-	2	-	-
33.	Malvaceae	1	4	-	1
34.	Moraceae	-	-	-	7
35.	Meliaceae	-	-	-	3
36.	Piperaceae	1	-	-	-
37.	Myrtaceae	-	-	-	4
38.	Portulacaceae	2	-	-	-
39.	Moringaceae	-	-	-	1
40.	Nyctaginaceae	2	1	-	-
41.	Phyllanthaceae	-	-	-	2
42.	Oleaceae	-	2	-	-
43.	Rhamnaceae	-	1	-	1
44.	Oxalidaceae	1	-	-	1
45.	Rosaceae	1	1	-	-
46.	Rubiaceae	-	2	-	1
47.	Sapotaceae	-	-	-	2
48.	Vitaceae	-	-	1	-
49.	Sapindaceae	-	-	-	1
50.	Verbenaceae	-	2	-	-
51.	Rutaceae	-	1	-	4
52.	Solanaceae	5	3	-	-
53.	Araliaceae	1	-	-	-
54.	Musaceae	-	1	-	-
55.	Araceae	3	-	-	-

56.	Liliaceae	2	-	-	-
57.	Zingiberaceae	2	-	-	-
58.	Arecaceae	-	-	-	4
59.	Commelinaceae	2	-	-	-
60.	Lemnaceae	1	-	-	-
61.	Asphodaceae	1	-	-	-
62.	Poaceae	6	1	-	-
63.	Pontedariaceae	1	-	-	-
64.	Cyperaceae	1	-	-	-
	Total	87	39	22	54

186

187 Table 2: Assessment of angiosperm taxa in Dupchanchia Upazila of Bogura district, Bangladesh

SL No.	Botanical name	Local name	Family	H	Tp	Ab	FT	VN
01	<i>Amaranthus spinosus</i>	Katanotey	Amaranthaceae	H	W	C	TY	RB107
02	<i>Amaranthus viridis</i>	Shaknotey	Amaranthaceae	H	W	VC	TY	RB48
03	<i>Achyranthes aspera</i>	Apang	Amaranthaceae	H	W	VC	TY	RB08
04	<i>Amaranthus tricolor</i>	Lalshak	Amaranthaceae	H	P	VC	TY	RB20
05	<i>Chenopodium album</i>	Bothua	Amaranthaceae	H	P	VC	Jun-Oct	RB162
06	<i>Cleosia argentea</i>	Morogful	Amaranthaceae	H	P	C	Nov-Feb	RB23
07	<i>Alternanthera sessilis</i>	Chanshi	Amaranthaceae	H	W	VC	TY	RB41
08	<i>Aerva</i>	Nuriya	Amaranthaceae	H	W	C	Dec-	RB16

	<i>sanguinolenta</i>						Apr	
09	<i>Beta vulgaris</i>	Beetroot	Amaranthaceae	H	P	R	Apr-Jul	RB91
10	<i>Amaranthus dubius</i>	Gaikhura	Amaranthaceae	H	W	VC	Feb-Oct	RB156
11	<i>Ourea lanata</i>	Unknown	Amaranthaceae	H	W	VC	May-Oct	RB80
12	<i>Justicia adhatoda</i>	Basok	Acanthaceae	S	W	C	Jan-Jun	RB15
13	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	H	W	C	Sep-Feb	RB175
14	<i>Mangifera indica</i>	Aam	Anacardiaceae	T	P	VC	Jan-Apr	RB34
15	<i>Spondias pinnata</i>	Amra	Anacardiaceae	T	P	C	Feb-Jun	RB43
16	<i>Centella asiatica</i>	Thankuni	Apiaceae	H	W	C	TY	RB11
17	<i>Coriandrum sativum</i>	Dhone	Apiaceae	H	P	VC	TY	RB56
18	<i>Daucus carota</i>	Gajor	Apiaceae	H	P	C	TY	RB58
19	<i>Annona squamosa</i>	Aata	Annonaceae	T	P	C	Mar-Jul	RB118
20	<i>Polyalthia longifolia</i>	Debdaru	Annonaceae	T	P	C	Mar-May	RB85
21	<i>Calotropis procera</i>	Akando	Apocynaceae	S	W	VC	May-Oct	RB19
22	<i>Catharanthus roseus</i>	Noyontara	Apocynaceae	H	P	VC	TY	RB31
23	<i>Rauvolfia serpentina</i>	Sarpogondha	Apocynaceae	S	W	C	TY	RB135
24	<i>Carissa carandas</i>	Kormoca	Apocynaceae	S	P	R	TY	RB120

25	<i>Nerium oleander</i>	Korobi	Apocynaceae	S	P	C	Jan-Jul	RB103
26	<i>Tabernaemontana divaricata</i>	Togor	Apocynaceae	S	P	C	May-Jan	RB149
27	<i>Plumeria rubra</i>	Kathgolap	Apocynaceae	T	P	C	May-Nov	RB159
28	<i>Thevetia peruviana</i>	Haldekoro bi	Apocynaceae	S	W	C	TY	RB07
29	<i>Asclepias curassavica</i>	Morichful	Apocynaceae	H	W	C	TY	RB21
30	<i>Tagetes patula</i>	Gada phul	Asteraceae	H	P	VC	Nov-Feb	RB45
31	<i>Eclipta alba</i>	Bhringraj	Asteraceae	H	W	VC	TY	RB46
32	<i>Helianthus annuus</i>	Surjomukhi	Asteraceae	H	P	C	TY	RB50
33	<i>Mikania cordata</i>	Asamlata	Asteraceae	H	W	VC	TY	RB51
34	<i>Dahlia pinnata</i>	Dahlia	Asteraceae	H	P	C	WS	RB150
35	<i>Xanthium indicum</i>	Hagra	Asteraceae	H	W	C	TY	RB87
36	<i>Ageratum conyzoides</i>	Shiyalmuti	Asteraceae	H	W	VC	TY	RB77
37	<i>Chrysanthemum coronarium</i>	Chandromollica	Asteraceae	H	P	C	Dec-Feb	RB05
38	<i>Lactuca sativa</i>	Lettuce	Asteraceae	H	P	C	Nov-Apr	RB02
39	<i>Tridax procumbens</i>	Tridhara	Asteraceae	H	W	VC	TY	RB01
40	<i>Sonchus arvensis</i>	Sonpalong	Asteraceae	H	W	C	Sep-Jun	RB60
41	<i>Wedelia trilobata</i>	Singapur Daisy	Asteraceae	H	W	VC	Jan-Dec	RB90

42	<i>Zinnia elegans</i>	Zinnia	Asteraceae	H	P	C	Jun-Sep	RB103
43	<i>Calendula officinalis</i>	Calendula	Asteraceae	H	P	C	WS	RB10
44	<i>Enhydra fluctuans</i>	Helencha	Asteraceae	H	W	VC	Jan-Apr	RB27
45	<i>Blumea lacera</i>	Borokucki sm	Asteraceae	H	W	C	Nov-Jul	RB89
46	<i>Acmella paniculata</i>	Nakful	Asteraceae	H	W	VC	Oct-Mar	RB144
47	<i>Cyanthillium cinereum</i>	Kuksima	Asteraceae	H	W	C	Nov-FeB	RB179
48	<i>Bombax ceiba</i>	Shimul	Bombacaceae	T	P	C	Feb-Apr	RB70
49	<i>Corchorus capsularis</i>	Pat	Tiliaceae	S	P	C	Mar-Jun	RB75
50	<i>Tecoma stans</i>	Chondrop ova	Bignoniaceae	S	P	C	Dec-Feb	RB09
51	<i>Nymphaea nouchali</i>	Shapla	Nymphaeaceae	H	W	C	Jun-Nov	RB165
52	<i>Bacopa monnieri</i>	Brammish ak	Scrophulariaceae	H	W	C	Jun-Aug	RB86
53	<i>Diospyros malabarica</i>	Gaab	Ebenaceae	T	W	R	May-Jul	RB193
54	<i>Nelumbo nucifera</i>	Poddo	Nelumbonaceae	H	W	C	May-Oct	RB164
55	<i>Elaeocarpus robustus</i>	Jolpai	Elaeocarpaceae	T	P	C	Mar-Sep	RB96
56	<i>Trapa bispinosa</i>	Panifol	Trapaceae	H	P	C	RS	RB119
57	<i>Brassica napus</i>	Sorisha	Brassicaceae	H	P	VC	Dec-Feb	RB72

58	<i>Raphanus sativus</i>	Mula	Brassicaceae	H	P	C	Jan-Mar	RB-42
59	<i>Brassica oleracea</i> var. <i>botrydis</i>	Phulkapi	Brassicaceae	H	P	VC	Dec-Feb	RB51
60	<i>Brassica oleracea</i> var. <i>capitata</i>	Badhakopi	Brassicaceae	H	P	VC	Dec-Feb	RB53
61	<i>Brassica oleracea</i> var. <i>italica</i>	Broccoli	Brassicaceae	H	P	C	Dec-Feb	RB58
62	<i>Brassica rapa</i> var. <i>rapa</i>	Shalgam	Brassicaceae	H	P	R	Nov-Feb	RB31
63	<i>Selenicereus undatus</i>	Dragon	Cactaceae	C	P	C	SW	RB67
64	<i>Trema orientale</i>	Jibon	Cannabaceae	T	W	C	Jan-Jun	RB28
65	<i>Ipomoea batatas</i>	Mistialu	Convolvulaceae	C	P	C	TY	RB137
66	<i>Cuscuta reflexa</i>	Sornolota	Convolvulaceae	C	W	C	Aug-Mar	RB79
67	<i>Ipomoea aquatica</i>	Kolmishak	Convolvulaceae	C	W	VC	TY	RB133
68	<i>Ipomoea carnea</i>	Dholkolmi	Convolvulaceae	S	W	VC	TY	RB84
69	<i>Terminalia arjuna</i>	Arjun	Combretaceae	T	P	R	Apr-Jul	RB71
70	<i>Terminalia chebula</i>	Haritaki	Combretaceae	T	P	R	May-Jun	RB73
71	<i>Benincasa hispida</i>	Chal kumra	Cucurbitaceae	C	P	C	May-Sep	RB100
72	<i>Coccinia grandis</i>	Telakucha	Cucurbitaceae	C	W	C	Mar-Dec	RB66

73	<i>Cucumis sativus</i>	Sosha	Cucurbitaceae	C	P	C	Apr- SeP	RB82
74	<i>Cucurbita maxima</i>	Misti kumra	Cucurbitaceae		P	C	Mar- Oct	RB83
75	<i>Citrullus lanatus</i>	Tormuj	Cucurbitaceae	C	P	C	Mar- Sep	RB69
76	<i>Trichosanthes anguina</i>	Dudkushi	Cucurbitaceae	C	P	C	Apr- Jun	RB76
77	<i>Trichosanthes dioica</i>	Potol	Cucurbitaceae	C	P	C	Apr- Aug	RB111
78	<i>Luffa acutangula</i>	Jhinga	Cucurbitaceae	C	P	C	Apr- Oct	RB114
79	<i>Cucumis melo</i>	Bangi	Cucurbitaceae	C	P	C	Mar- Jul	RB102
80	<i>Momordica charantia</i>	Korolla	Cucurbitaceae	C	P	C	May- Oct	RB128
81	<i>Lagenaria siceraria</i>	Lau	Cucurbitaceae	C	P	VC	Jun- Nov	RB123
82	<i>Mormordica dioica</i>	Kakrol	Cucurbitaceae	C	P	C	Jun- Nov	RB126
83	<i>Luffa cylindrica</i>	Kodor	Cucurbitaceae	C	P	C	TY	RB109
84	<i>Basella alba</i>	Puishak	Basellaceae	C	P	VC	Nov- Feb	RB139
85	<i>Carica papaya</i>	Pepe	Caricaceae	T	P	VC	TY	RB64
86	<i>Kalanchoe pinnata</i>	Pathorkuchi	Crassulaceae	H	W	C	Jan- Mar	RB03
87	<i>Heliotropium indicum</i>	Hatishur	Boraginaceae	H	W	C	Mar- Nov	RB173
88	<i>Dillenia indica</i>	Chalta	Dilleniaceae	T	P	C	MaY- Aug	RB177
89	<i>Euphorbia hirta</i>	Dudhiya	Euphorbiaceae	H	W	VC	TY	RB178

90	<i>Euphorbia pulcherrima</i>	Crismas phul	Euphorbiaceae	S	P	C	Nov_ Feb	RB182
91	<i>Euphorbia tirucalli</i>	Pencil cactus	Euphorbiaceae	S	P	C	Sep- Dec	RB181
92	<i>Euphorbia milii</i>	Katamuku it phul	Euphorbiaceae	S	P	C	TY	RB184
93	<i>Ricinus communis</i>	Verenda	Euphorbiaceae	S	W	C	Jan- Oct	RB172
94	<i>Clitoria tarnetea</i>	Oporajita	Fabaceae	C	P	C	Jun- Dec	RB157
95	<i>Dalbergia sissoo</i>	Sishu	Fabaceae	T	P	C	Mar- May	RB59
96	<i>Lablab purpureus</i>	Shim	Fabaceae	C	P	VC	Nov- Feb	RB167
97	<i>Samanea saman</i>	Rain tree	Fabaceae	T	P	C	Apr_ Sep	RB104
98	<i>Leucaena leucocephala</i>	Epilepil	Fabaceae	T	P	C	Mar- Jul	RB95
99	<i>Vigna sinensis</i>	Borbote	Fabaceae	C	P	C	Apr- Jun	RB99
100	<i>Guilandina bonduc</i>	Nata	Fabaceae	S	W	R	Feb- Sep	RB130
101	<i>Arachis hypogaea</i>	China badam	Fabaceae	H	P	R	Mar- Dec	RB108
102	<i>Lens culinaris</i>	Mashur	Fabaceae	H	P	C	Feb- Sep	RB138
103	<i>Mimosa pudica</i>	Lojjaboti	Fabaceae	H	W	C	Sep- Nov	RB154
104	<i>Senna sophora</i>	Kolkashunda	Fabaceae	S	W	C	Dec- Mar	RB14
105	<i>Albizia lebbeck</i>	Siris	Fabaceae	T	P	C	Mar- Jul	RB56

106	<i>Pisum sativum</i>	Motorshuti	Fabaceae	H	P	C	Nov-Feb	RB38
107	<i>Delonix regia</i>	kriathinoc hura	Fabaceae	T	P	C	Apr-Sep	RB185
108	<i>Acacia nilotica</i>	Babla	Fabaceae	T	P	C	Mar-Dec	RB183
109	<i>Tamarindus indica</i>	Tetul	Fabaceae	T	P	C	Jan-May	RB22
110	<i>Clerodendrum viscosum</i>	Vatpata	Lamiaceae	S	W	CN	Dec-Feb	RB13
111	<i>Leucas aspera</i>	Kanshira	Lamiaceae	H	W	C	TY	RB74
112	<i>Mentha spicata</i>	Pudina	Lamiaceae	H	W	C	Jul-Sep	RB132
113	<i>Ocimum sanctum</i>	Tulshi	Lamiaceae	S	P	C	TY	RB98
114	<i>Cinnamomum tamala</i>	Teja patta	Lauraceae	T	P	C	Feb-Oct	RB176
115	<i>Cinnamomum Verum</i>	Darchini	Lauraceae	T	P	VR	Jan-Mar	RB201
116	<i>Punica granatum</i>	Dalim	Lythraceae	S	P	C	Jan-Aug	RB174
117	<i>Lawsonia inermis</i>	Mehedi	Lythraceae	S	P	C	Jun-Dec	RB106
118	<i>Abroma augustum</i>	Ulotkombol	Malvaceae	S	W	C	Jun-Oct	RB158
119	<i>Hibiscus rosa-sinensis</i>	Joba	Malvaceae	S	P	VC	TY	RB151
120	<i>Gossypium harbaceum</i>	Karpas	Malvaceae	T	P	R	Feb-Jun	RB40
121	<i>Hibiscus mutabilis</i>	Sthal padma	Malvaceae	S	P	C	TY	RB97
122	<i>Sida cordifolia</i>	Berela	Malvaceae	H	W	C	Sep-	RB161

							Dec	
123	<i>Malvaviscus arboreus</i>	Rokto joba	Malvaceae	S	P	C	May-Nov	RB155
124	<i>Artocarpus heterophyllus</i>	Kathal	Moraceae	T	P	VC	Feb-Jul	RB68
125	<i>Ficus hispida</i>	Khoksa	Moraceae	T	W	C	Apr-Aug	RB129
126	<i>Ficus racemosa</i>	Jagdumur	Moraceae	T	W	R	Mar-May	RB63
127	<i>Morus indica</i>	Tut	Moraceae	T	P	R	May-Jul	RB105
128	<i>Artocarpus lacucha</i>	Dewa	Moraceae	T	W	R	Apr-Jun	RB117
129	<i>Ficus benghalensis</i>	Bot	Moraceae	T	W	C	May-Jul	RB127
130	<i>Ficus religiosa</i>	Pakur	Moraceae	T	W	C	Jul-Nov	RB188
131	<i>Azadirachta indica</i>	Neem	Meliaceae	T	P	VC	Mar-May	RB121
132	<i>Melia azedarach</i>	Ghoranee m	Meliaceae	T	P	C	Mar-May	RB186
133	<i>Swietenia mahagoni</i>	Mehogoni	Meliaceae	T	P	C	Apr-Sep	RB187
134	<i>Peperomia pellucida</i>	Luchi pata	Piperaceae	H	W	VC	TY	RB17
135	<i>Eucalyptus tereticornis</i>	Euklyptus	Myrtaceae	T	P	VC	TY	RB21
136	<i>Psidium guajava</i>	Peyara	Myrtaceae	T	P	VC	TY	RB65
137	<i>Syzygium cumini</i>	Jam	Myrtaceae	T	P	C	Mar-Jun	RB49
138	<i>Syzygium</i>	Jamrul	Myrtaceae	T	P	C	Feb-	RB26

	<i>samarangense</i>						Mar	
139	<i>Portulaca grandiflora</i>	Nongta ful	Portulacaceae	H	P	VC	Mar-Oct	RB148
140	<i>Portulaca oleracea</i>	Nongtashak	Portulacaceae	H	W	C	May-Jul	RB101
141	<i>Moringa oleifera</i>	Sojina	Moringaceae	T	P	VC	Jan-Aug	RB134
142	<i>Bougainvillea spectabilis</i>	Gateful	Nyctaginaceae	S	P	C	TY	RB168
143	<i>Mirabilis jalapa</i>	Sondhamaloti	Nyctaginaceae	H	P	CN	TY	RB11
144	<i>Boerhavia diffusa</i>	Punnornoba	Nyctaginaceae	H	W	C	Jun-Nov	RB170
145	<i>Phyllanthus acidus</i>	Horifol	Phyllanthaceae	T	P	R	Mar-Jun	RB52
146	<i>Phyllanthus emblica</i>	Amloki	Phyllanthaceae	T	P	R	TY	RB07
147	<i>Jasminum sambac</i>	Beli	Oleaceae	S	P	C	TY	RB113
148	<i>Nyctanthes arbor-tristis</i>	Sheuli	Oleaceae	S	P	C	Jun-Oct	RB157
149	<i>Ziziphus mauritiana</i>	Boroi	Rhamnaceae	T	P	VC	Sep-Jan	RB25
150	<i>Ziziphus oenopolia</i>	Bon boroi	Rhamnaceae	S	W	R	Jul-Sep	RB135
151	<i>Averrhoa carambola</i>	Kamranga	Oxalidaceae	T	P	C	Sep-Jan	RB36
152	<i>Oxalis corniculata</i>	Amrul	Oxalidaceae	H	W	C	Sep-May	RB120
153	<i>Rosa centifolia</i>	Golap	Rosaceae	S	P	VC	TY	RB18
154	<i>Fragaria vesca</i>	Strawberr	Rosaceae	H	P	R	Mar-	RB189

		y					Jul	
155	<i>Gardenia jasminoides</i>	Gondhoraj	Rubiaceae	S	P	C	Mar-May	RB55
156	<i>Anthocephalus chinensis</i>	Kodom.	Rubiaceae	T	P	C	May-JuL	RB93
157	<i>Ixora coccinea</i>	Rongon	Rubiaceae	S	P	C	TY	RB24
158	<i>Mimusops elengi</i>	Bokul	Sapotaceae	T	P	C	Mar-Apr	RB44
159	<i>Manilkara zapota</i>	Sofeda	Sapotaceae	T	P	C	TY	RB131
160	<i>Vitis vinifera</i>	Angur	Vitaceae	C	P	C	May-Aug	RB125
161	<i>Litchi chinensis</i>	Lichu	Sapindaceae	T	P	C	Apr-Jun	RB62
162	<i>Vitex negundo</i>	Nisinda	Verbenaceae	S	W	C	May-SeP	RB115
163	<i>Lantana camara</i>	Ghaneri	Verbenaceae	S	W	C	TY	RB142
164	<i>Aegle marmelos</i>	Bel	Rutaceae	T	P	C	Apr-Aug	RB112
165	<i>Citrus aurantifolia</i>	labu	Rutaceae	T	P	VC	Mar-Sep	RB136
166	<i>Citrus maxima</i>	Batabi lebu	Rutaceae	T	P	C	Feb-Apr	RB81
167	<i>Citrus reticulata</i>	Komla	Rutaceae	T	P	C	Jan-Nov	RB-163
168	<i>Murraya paniculata</i>	Kamini	Rutaceae	S	P	C	Mar-Oct	RB141
169	<i>Capsicum annuum</i>	Morich	Solanaceae	H	P	VC	TY	RB140
170	<i>Cestrum nocturnum</i>	Hasnahren a	Solanaceae	S	P	C	TY	RB78

171	<i>Solanum lycopersicum</i>	Tomato	Solanaceae	H	P	C	Sep-Apr	RB37
172	<i>Solanum tuberosum</i>	Alu	Solanaceae	H	P	VC	Oct-Feb	RB33
173	<i>Solanum melongena</i>	Begun	Solanaceae	S	P	C	Oct-Feb	RB159
174	<i>Datura metel</i>	Dhutura	Solanaceae	S	P	C	Jan-Dec	RB47
175	<i>Solanum surattense</i>	Kantakari	Solanaceae	H	W	C	Oct-Feb	RB32
176	<i>Physalis minima</i>	Kopal fotka	Solanaceae	H	W	C	TY	RB202
177	<i>Hydrocotyle vulgaris</i>	Thalpata	Araliaceae	H	W	C	May-Sep	RB190
178	<i>Musa paradisiaca</i>	Kola	Musaceae	S	P	VC	TY	RB147
179	<i>Amorphophallus campanulatus</i>	Ool Kochu	Araceae	H	P	C	TY	RB243
180	<i>Alocasia macrorrhizos</i>	Mankochu	Araceae	H	P	C	Jul-Oct	RB124
181	<i>Colocasia esculenta</i>	Kochu	Araceae	H	W	VC	TY	RB12
182	<i>Allium cepa</i>	Piaj	Liliaceae	H	P	C	Feb-Apr	RB306
183	<i>Allium sativum</i>	Rosun	Liliaceae	H	P	C	Feb-Apr	RB54
184	<i>Zingiber officinale</i>	Ada	Zingiberaceae	H	P	C	Mar-Aug	RB122
185	<i>Curcuma longa</i>	Holud	Zingiberaceae	H	P	C	Mar-Feb	RB57
186	<i>Areca catechu</i>	Supari	Arecaceae	T	P	C	TY	RB169
187	<i>Phoenix</i>	Khejur	Arecaceae	T	P	VC	Dec-	RB04

	<i>dactylifera</i>						Jul	
188	<i>Borassus flabellifer</i>	Tal	Arecaceae	T	P	VC	Jun-Aug	RB116
189	<i>Cocos nucifera</i>	Narikel	Arecaceae	T	P	C	Mar-Jul	RB92
190	<i>Tradescantia spathacea</i>	Rheo discolor	Commelinaceae	H	P	C	TY	RB180
191	<i>Commelina benghalensis</i>	Kanshira	Commelinaceae	H	W	VC	Apr-Nov	RB166
192	<i>Lemna perpusilla</i>	Khudi pana	Lemnaceae	H	W	C	TY	RB152
193	<i>Aloe vera</i>	Ghrita kumari	Asphodaceae	H	P	C	Mar-May	RB160
194	<i>Bambusa vulgaris</i>	Bash	Poaceae	T	P	VC	TY	RB06
195	<i>Cynodon dactylon</i>	Durba	Poaceae	H	W	VC	TY	RB19
196	<i>Saccharum officinarum</i>	Kusar	Poaceae	H	P	C	Oct-Jan	RB171
197	<i>Zea mays</i>	Vutta	Poaceae	H	P	C	Mar-Jul	RB88
198	<i>Oryza sativa</i>	Dhan	Poaceae	H	P	VC	Jul-Sep	RB200
199	<i>Saccharum spontaneum</i>	Kashphul	Poaceae	H	W	C	Jun-Jul	RB94
200	<i>Setaria glauca</i>	Siyal ghas	Poaceae	H	W	C	TY	RB191
201	<i>Eichhornia crassipes</i>	Dol	Pontedariaceae	H	W	VC	TY	RB149
202	<i>Cyperus esculentus</i>	Nagor motha	Cyperaceae	H	W	C	Jul-Oct	RB196

188 H = Herb, S= Shrub, T = Tree, C= Climber, P= Planted, W= Wild, VC = Very Common, C = Common,
 189 R= Rare, VR= Very Rare WS= Winter Season, TY=Throughout of the Year, RS= Rainy Season,
 190 FT=Flowering Time, VN=Voucher number, H=Habit, Tp=Type, Ab=Abundance

191

192 Table 3: List of medicinal plants and their use in different ailments by the local people at Dupchanchia
 193 Upazila of Bogura District, Bangladesh.

Sl. No.	Scientific name	Local name	Family	Habit	Used parts	Medicinal use
01	<i>Moringa oleifera</i>	Sojina	Moringaceae	Tree	Leaf, Fruit	Used for joint pain, swelling, and mild arthritis
02	<i>Ocimum sanctum</i>	Tulshi	Lamiaceae	Herb	Leaf	Used for cough, cold, asthma, and bronchitis
03	<i>Mentha spicata</i>	Pudina	Lamiaceae	Herb	Leaf	It helps to relieve indigestion, gas, and bloating
04	<i>Tamarindus indica</i>	Tetul	Fabaceae	Tree	Fruit	Treats constipation, indigestion, and flatulence
05	<i>Lablab purpureus</i>	Shim	Fabaceae	Climber	Leaf	Leaf paste applied to eczema, boils, and ulcers
06	<i>Dalbergia sissoo</i>	Sishu	Fabaceae		Leaf, Bark	Leaf decoction is used for diarrhea and dysentery
07	<i>Acacia nilotica</i>	Babla	Fabaceae	Tree	Leaf	Leaf is used for wound healing, diarrhea, and dysentery
08	<i>Musa paradisiaca</i>	Kola	Mussaceae	Shurb	Fruit	Used to treat dysentery and diarrhea
09	<i>Coccinia grandis</i>	Tela kucha	Cucurbitaceae	Climber	Whole plant	Used for diabetes treatment
10	<i>Cucumis sativus</i>	Sosha	Cucurbitaceae	Climber	Fruit	Reduces body heat. Helpful in summer heat

						and fever
11	<i>Cucumis melo</i>	Bhangi	Cucurbitacea	Climber	Fruit	Increases urine flow. Helps in urinary disorders
12	<i>Citrullus lanatus</i>	Tormuj	Cucurbitacea	Climber	Fruit	Used for gastrointestinal, respiratory, and urinary diseases
13	<i>Trichosanthes anguina</i>	Dud kushi	Cucurbitacea	Climber	Fruit, Leaf	Used for constipation, indigestion, and acidity.
14	<i>Luffa acutangula</i>	Jhinga	Cucurbitacea	Climber	Fruit, Leaf	Fruit extract may help lower blood sugar levels.
15	<i>Momordica charantia</i>	Korolla	Cucurbitacea	Climber	Fruit, Leaf	Fruit and leaf extracts help detoxify the liver and improve its function.
16	<i>Euphorbia hirta</i>	Dudhiya	Euphorbiaceae	Herb	Leaf	Leaf paste is applied to wounds, boils, and eczema.
17	<i>Ricinus communis</i>	Verenda	Euphorbiaceae	Shrub	Seed	Castor oil from seeds is a powerful purgative, used for constipation.
18	<i>Phyllanthus acidus</i>	Horifol	Phyllanthaceae	Tree	Fruit	Fruit pulp is used as a cooling agent and to reduce fever.
19	<i>Phyllanthus emblica</i>	Amloki	Phyllanthaceae	Tree	Fruit	Useful for cold, cough, and general weakness.
20	<i>Lawsonia inermis</i>	Mehedi	Lythraceae	Shrub	Leaf	Effective against bacteria and fungi, useful for skin infections.
21	<i>Punica granatum</i>	Dalim	Lythraceae	Shrub	Fruits	Improves digestion and appetite

22	<i>Hydrocotyle vulgaris</i>	Thalpata	Araliaceae	Herb	Leaf	Leaf paste is applied to cuts, ulcers, and wounds.
23	<i>Dillenia indica</i>	Chalta	Dilleniaceae	Tree	Fruit	Used for cough, cold, and bronchitis.
24	<i>Carica papaya</i>	Pepe	Caricaceae	Tree	Fruit	Fruit and seeds improve digestion
25	<i>Portulaca oleracea</i>	Nongta shak	Portulacaceae	Herb	Leaf	Leaves applied to cuts, ulcers, burns, and rashes
26	<i>Azadirachta indica</i>	Neem	Meliaceae	Tree	Leaf, Bark	Leaf paste, oil, or decoction is used for eczema, acne, boils, ulcers, and wounds.
27	<i>Nelumbo nucifera</i>	Poddo	Nelumbonaceae		Seed, Rhizome	Seeds and rhizomes are used to treat diarrhea, dysentery, and indigestion
28	<i>Syzygium samarangense</i>	Jamrul	Myrtaceae	Tree	Fruit	Fruit protects the heart and reduces oxidative stress
29	<i>Syzygium cumini</i>	Jam	Myrtaceae	Tree	Fruit, Seed	Fruit and seed extracts help in diarrhea, dysentery, and indigestion.
30	<i>Psidium guajava</i>	Peyara	Myrtaceae	Tree	Fruit, Leaf	Leaf decoction is used for cough, cold, and sore throat.
31	<i>Litchi chinensis</i>	Lichu	Sapindaceae	Tree	Fruit	Helps to boost immunity and improve digestion.
32	<i>Cinnamomum tamala</i>	Teja patta	Lauraceae	Tree	Leaf	Leaf powder or decoction improves digestion, relieves flatulence, bloating, and indigestion
33	<i>Terminalia</i>	Arjun	Combretaceae	Tree	Bark	Bark extract is used to

	<i>arjuna</i>					strengthen the heart muscles.
34	<i>Terminalia chebula</i>	Horitaki	Combretaceae	Tree	Fruit	Helpful for cough, sore throat, and asthma
35	<i>Rauvolfia serpentina</i>	Sarpogondha	Apocynaceae	Shrub	Root	Lowers blood pressure and calms the nervous system
36	<i>Catharanthus roseus</i>	Noyon tara	Apocynaceae	Herb	Leaf	Used in traditional medicine to help control diabetes and reduce blood sugar levels.
37	<i>Carissa carandus</i>	Koromcha	Apocynaceae	Shrub	Fruit	Used for Fruit and root used for indigestion, diarrhea, and dysentery
38	<i>Peperomia pellucida</i>	Luchipata	Piperaceae	Herb	Leaf	Used for stomachache and indigestion
39	<i>Solanum tuberosum</i>	Alu	Solanaceae	Shrub	Fruit	Paste from a raw potato applied to burns, skin rashes, and dark spots
40	<i>Capsicum annuum</i>	Morich	Solanaceae	Herb	Fruit	Helps improve circulation and reduce cholesterol
41	<i>Solanum lycopersicum</i>	Tomato	Solanaceae	Herb	Fruit	Juice or pulp applied externally helps with sunburn, acne, and skin rashes
42	<i>Datura metel</i>	Dhutura	Solanaceae	Shrub	Leaf, seed	Leaf and seed extracts are used in asthma, cough, and bronchitis
43	<i>Hibiscus rosa-sinensis</i>	Joba	Malvaceae	Shrub	Leaf	Leaf juice is used for cough and cold
44	<i>Vitex negundo</i>	Nisinda	Verbenaceae	Shrub	Leaf, Root	Leaf and root extracts are used for cough, asthma, and bronchitis

45	<i>Artocarpus heterophyllus</i>	Kathal	Moraceae	Tree	Fruit	Fruit improves digestion and prevents constipation
46	<i>Ficus racemosa</i>	Jog dumur	Moraceae	Tree	Fruit	Reduces swelling, joint pain, and inflammation
47	<i>Artocarpus lacucha</i>	Dewa	Moraceae	Tree	Fruit	Bark and fruit decoction is traditionally used to reduce fever
48	<i>Allium cepa</i>	Piaj	Liliaceae	Herb	Rhizome	Improves digestion, relieves gas
49	<i>Allium sativum</i>	Rosun	Liliaceae	Herb	Bulb	lowers blood pressure and cholesterol
50	<i>Elaeocarpus robustus</i>	Jolpai	Elaeocarpaceae	Tree	Fruit	Used for the treatment of diarrhea, dysentery, and stomach disorders
51	<i>Ziziphus mauritiana</i>	Boroi	Rhamnaceae	Tree	Leaf, Fruit	Leaf and fruit paste applied to wounds, ulcers, and skin infections
52	<i>Averrhoa carambola</i>	Kam ranga	Oxalidaceae	Tree	Fruit	Reduces swelling and joint pain
53	<i>Oxalis corniculata</i>	Amrul	Oxalidaceae	Tree	Leaf	Used for joint pain, swelling, and skin inflammation
54	<i>Manilkara zapota</i>	Sofeda	Sapotaceae	Tree	Fruit	Ripe fruit helps with constipation
55	<i>Vitis vinifera</i>	Angur	Vitaceae	Climber	Fruit	Improves digestion and acts as a mild laxative
56	<i>Aegle marmelos</i>	Bel	Rutaceae	Tree	Fruit	Juice improves digestion and appetite

57	<i>Citrus aurantifolia</i>	labu	Rutaceae	Tree	Fruit	Improves digestion, relieves acidity, and constipation
58	<i>Citrus maxima</i>	Batabi lebu	Rutaceae	Tree	Fruit	Improves digestion, boosts immunity, and is useful for cough and cold
59	<i>Citrus reticulata</i>	Komla	Rutaceae	Tree	Fruit	Juice used for acne, pigmentation, and skin infections
60	<i>Zingiber officinale</i>	Ada	Zingiberaceae	Herb	Rhizome	Relieves indigestion, nausea, vomiting, and flatulence
61	<i>Curcuma longa</i>	Holud	Zingiberaceae	Herb	Rhizome	Paste is applied to cuts, burns, acne, and skin infections
62	<i>Commelina benghalensis</i>	Kan shira	Commelinaceae	Herb	Leaf	Leaf and stem paste applied to swelling, joint pain, and skin inflammation
63	<i>Cocos nucifera</i>	Narikel	Arecaceae	Tree	Fruit	Coconut water is used for rehydration and relief from indigestion
64	<i>Aloe vera</i>	Alovera	Asphodaceae	Herb	Leaf	Gel from leaves applied to burns, cuts, ulcers, rashes, and acne
65	<i>Cynodon dactylon</i>	Durba	Poaceae	Herb	Leaf	Leaf paste applied to cuts, ulcers, and boils

Table 4: Analysis of data based on the habit of angiosperm flora in the study area

SL No.	Habit	No. of species	Percentage (%)	Total no. of species
01	Herb	87	43.07%	

02	Shurb	39	19.31 %	202
03	Climber	22	10.89%	
04	Tree	54	26.73%	

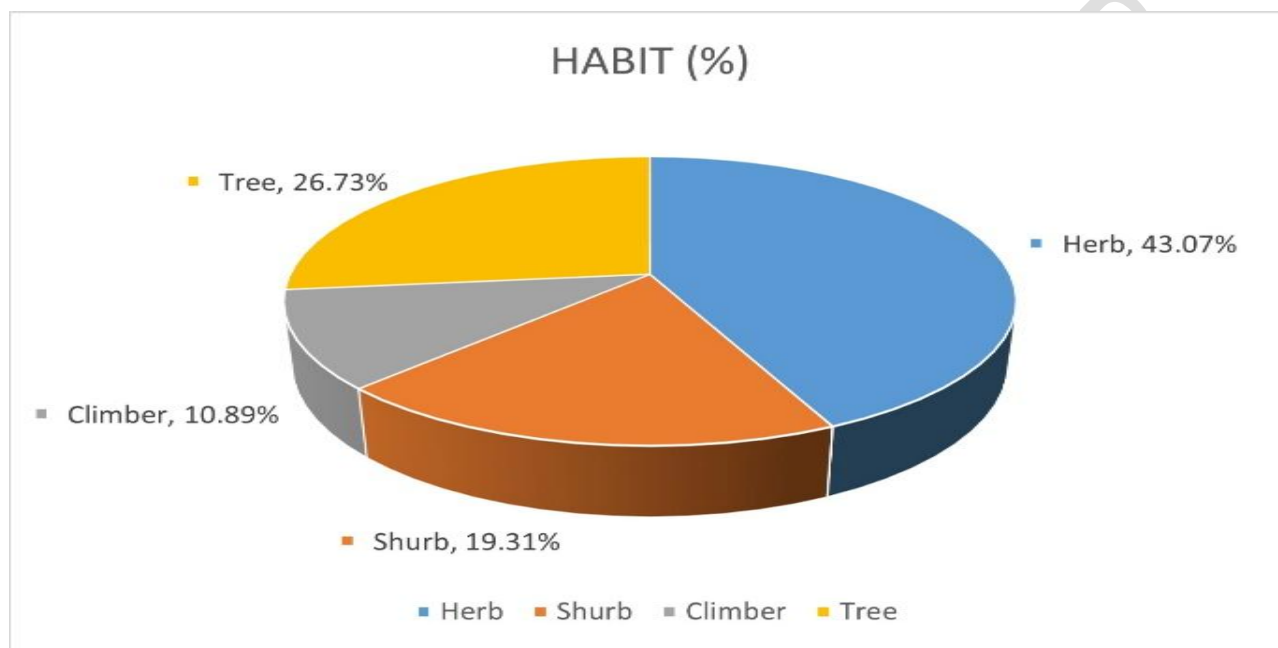


Figure 1: Recorded plant habit in the study area

Table 5: Analysis of data based on the abundance of angiosperm flora in the study area

SL No.	Abundance	No. of species	Percentage (%)	Total no. of species
01.	Very Common	51	25.25%	202
02.	Common	136	67.33%	
03.	Rare	14	6.93%	
04.	Very Rare	1	0.49%	

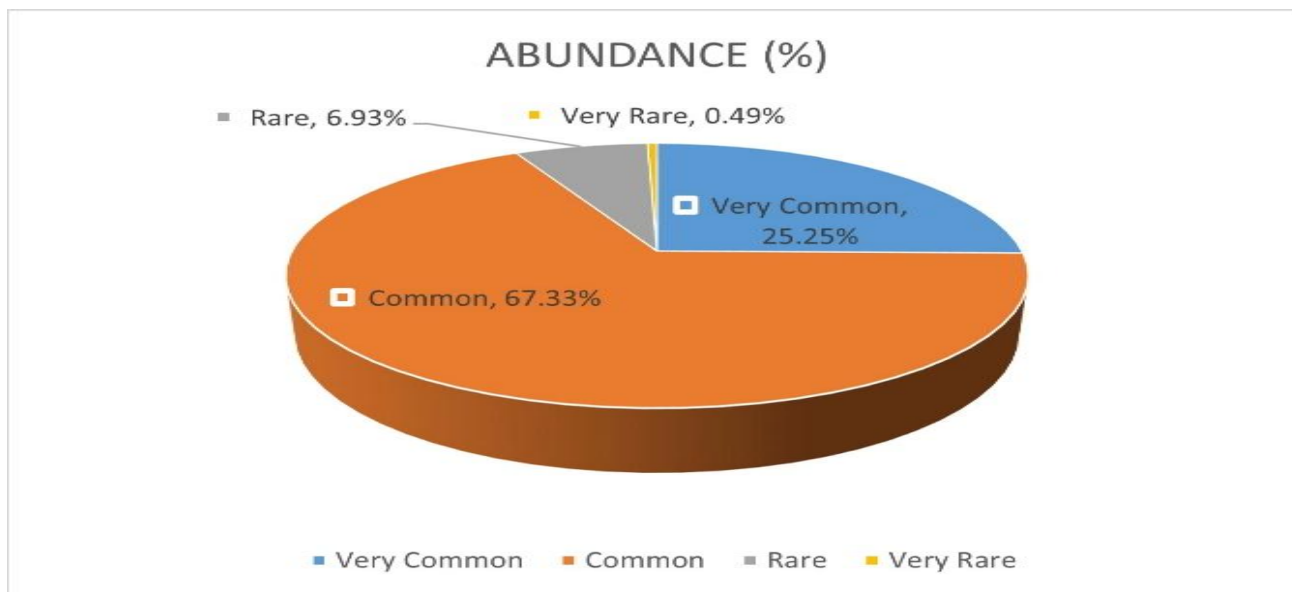


Figure 2: Recorded abundance in the study area

Table 6: Analysis of data based on the relative occurrence of angiosperm flora in the study area

SL No.	Relative occurrence	No. of species	Percentage (%)	Total no. of species
01.	Wild	69	34.16%	202
02.	Planted	133	65.84%	

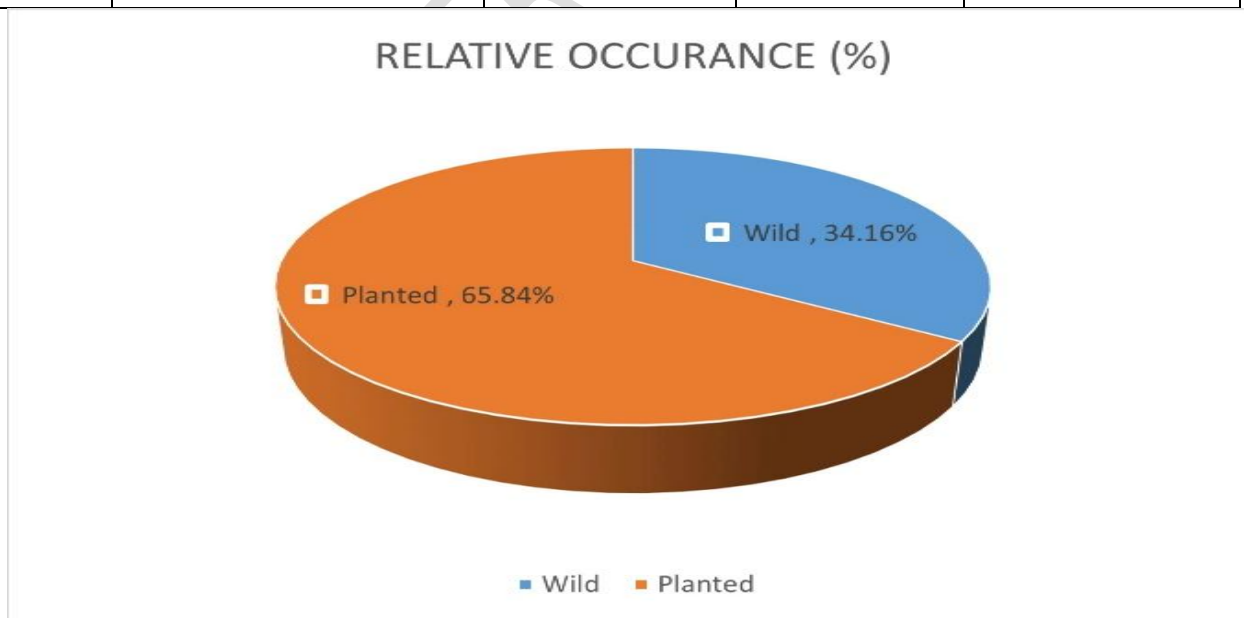


Figure 3: Recorded relative occurrence in the study area.

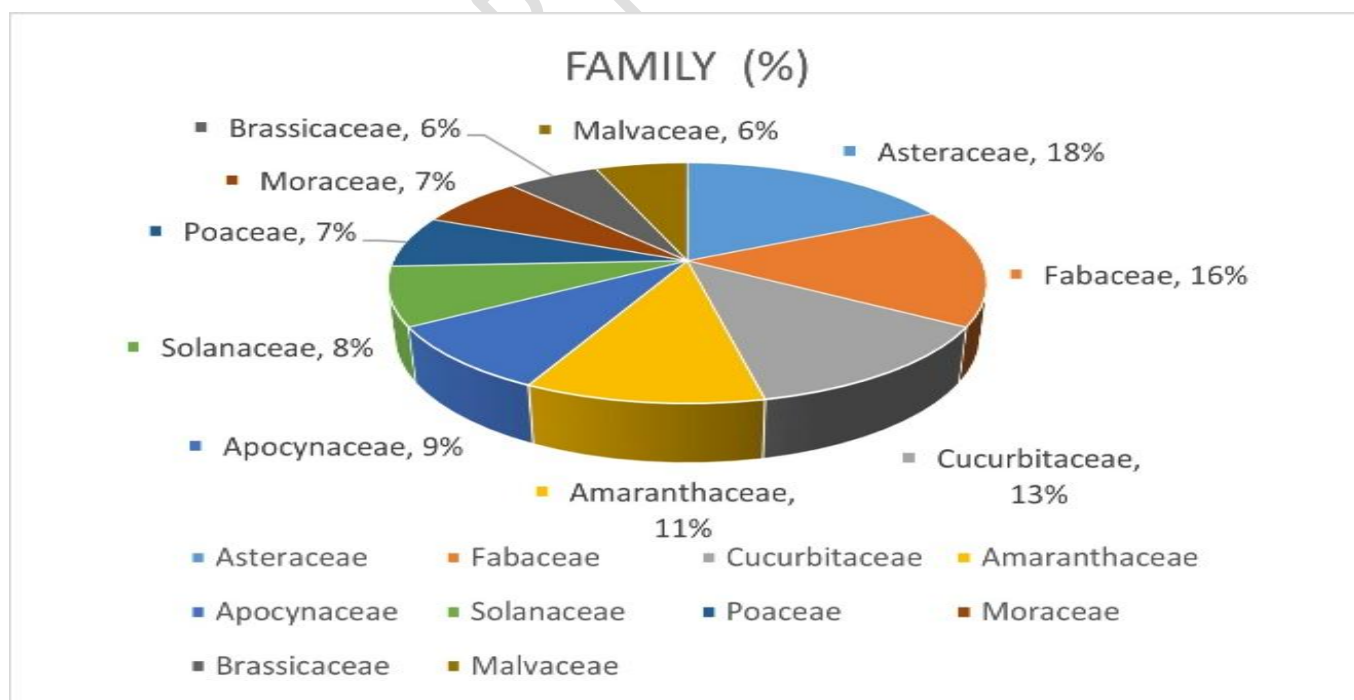
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211 Table 7: Analysis of data based on the availability of the dominant family of angiosperm flora in the area

SL No.	Family name	No. of species	Percentage (%)	Total no. of species
01.	Asteraceae	18	17.82%	202
02.	Fabaceae	16	15.84%	
03.	Cucurbitaceae	13	12.87%	
04.	Amaranthaceae	11	10.89%	
05.	Apocynaceae	09	8.91%	
06.	Solanaceae	08	7.92%	
07.	Poaceae	07	6.93%	
08.	Moraceae	07	6.93%	
09.	Brassicaceae	06	5.94%	
10.	Malvaceae	06	5.94%	

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215 Figure 4: Recorded dominant families in the study area.

Conclusion:-

The floristic survey of Dupchachia Upazila in the Bogura district of Bangladesh successfully documented a total of 202 angiosperm species between July 2024 and December 2025. This 18-month research period ensured comprehensive coverage of seasonal variations and plant phenology across the study area. Out of the recorded species, *Carissa carandas*, *Diospyros malabarica*, *Terminalia arjuna*, *Terminalia chebula*, *Guilandina bonduc*, *Gossypium harbaceum*, *Morus indica*, *Artocarpus lacucha*, *Ziziphus oenoplia*, *Phyllanthus acidus*, *Phyllanthus emblica* etc. were rare species in the study area. Among the recorded flora, 65 species were identified as key medicinal plants, highlighting significant ethno-medicinal utility by treating 37 different human ailments and health conditions. These findings underscore the rich botanical diversity of Dupchachia Upazila and demonstrate the vital role traditional plant-based remedies play in local healthcare. The study provides crucial baseline data for future biodiversity conservation, pharmacological research, and sustainable resource management in Northern Bangladesh.

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References:-

1. Ahmed, Z. U. Begum, Z. N. T. Hassan, M. A., Khonker, M., Kabir, S.M. H., Ahmad M. Ahmed A. T. A. Rahman, A. K. A. and Haque, E. U. (Eds). (2008-2009). Encyclopedia of Flora and Fauna of Soc. Bangladesh 6-10 Angiosperma Dicotyledons. Asiat. Soc. Bangladesh.
2. Arefin, M.K. Rahman, M.M... Uddin, M.Z. and Hassan, M.A. (2011). Angiosperm Floras of Satchari National Park. Habiganj, Bangladesh Bangladesh J. Plam Taxon, 18(2): 117-140
3. Alexiades, M. N. (Ed) (1996). Selected Guidelines for Ethno Botanical Research: A Field Manual. The New York Botanical Garden, New York. 1996.
4. Anisuzzaman M., Rahman, A.H.M.M., Rashid, M. H., Naderuzzaman, A .T. M., Islam, A.K.M.R. (2007). An Ethnobotanical Study of Madhupur, Tangail. *Journal of Applied Sciences Research*. 3(7): 519-530.

5. Bangladesh Population and Housing Census (2011). Zila Report- Bogra . *bbs.gov.bd*. Bangladesh Bureau of Statistics.
6. Chakma, S., Hossain, M.K., Khan, B.M. and Kabir, M.A. (2003). Ethno-botanical knowledge of Chakma community in the use of medicinal plants in Chittagong Hill Tracts, Bangladesh. *MFP News XIII* (3):3-7
7. Christenhusz, M.J.M AND Byng. J.W. (2016). The number of known plants species in the world and its annual increase. *Phytotaxa*, 261(3): 201-217.
8. Faruque, M.O. and Uddin, S.B. (2014). Ethnomedicinal study of the Marma community of Bandarban district of Bangladesh. *Academia Journal of Medicinal Plants*. 2(2): 014-025.
9. Ghani, A. (2003). Medicinal Plants of Bangladesh Asiatic Society of Bangladesh, Dhaka.
10. Hooker, J.D. (1877). *Flora of British India*. Vols. 1-7. L. Reeve and Co. Ltd. London, UK.
11. Hossain, A.B.M.E. and Khan, S.A. (1993). A vegetational analysis on the Compositae of the eastern region of Bangladesh. *Bangladesh Jour. Life Sci.* 5(2): 49-55.
12. Huq, A.M. (1986). *Plant Names of Bangladesh*. Bangladesh National Herbarium, BARC, Dhaka, Bangladesh.
13. Islam, M.R., Uddin.M.Z. and Hassan, M.A. (2009). An Assessment of the Angiosperm Flora of RamgarhUpazilla of Khagrachhari District, Bangladesh *Bangladesh J. Plant Taxon.* 16(2): 115-140.
14. Khan, M.S. and Banu, F. (1972).A taxonomic report on the angiospermic flora of Chittagong Hill Tracts-2. *J. Asiat. Soc. Bangladesh.* 17(2): 63-68.
15. Khan, M.S. and Huq, A.M. (2001). The vascular flora of Chunati Wildlife Sanctuary in south Chittagong, Bangladesh *Bangladesh J. Plant Taxon.* 8(1): 47-64.
16. Khisha, B. (1996). Chakma Talik Chikitsa. Herbal Medicine Centre Committee, Rajban Bihar, Rajbari, Rangamati. Pp.1-136.
17. Kirtikar, K.R. and Basu, B.D. (1987). *Indian Medicinal Plants*. Vols. 1-4. Lalit Mohan Basu, Allahabad, Jayyed Press, New Delhi, India
18. Lindley, J. (1830). *Introduction to the Natural System of Botany*, Longman. London, UK.
19. Moniruzzaman, M., Hassan, M.A., Rahman, M.M., Layla, S. and Islam, M.R. (2012). A Preliminary Checklist of the Angiospermic Flora of Daulotpur Upazilla in. Kushtia District, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* 38(1): 53-65.
20. Prain, D. (1903). *Bengal Plants* Vols. 1-2. Botanical Survey of India. Calcutta, India
21. Pasha, M.K. and Uddin, S.B. 2013.*Dictionary of Plant Names of Bangladesh (Vascular Plants)*. Janokalyan Prokashani. Chittagong, Dhaka, Bangladesh.
22. Rahman, A.H.M.M, Anisuzzaman, M., Ahmed, F., Zaman, A.T.M.N. and Islam, A.K.M.R. (2007).A Floristic Study in the Graveyards of Rajshahi City. *Research Journal of Agriculture and Biological Sciences.* 3(6): 670-675.
23. Rahman, A.H.M.M. (2013). Graveyards angiosperm diversity of Rajshahi city, Bangladesh with emphasis on medicinal plants *American Journal of Life Sciences.* 1 (3): 98-104.
24. Rahman, A.H.M.M. (2013). Study of Species Diversity on Cucurbitaceae family at Rajshahi Division, Bangladesh. *Journal of Plant Sciences.* 1(2): 18-21.
25. Rahman, A.H.M.M. (2013). Systematic studies on Asteraceae in the northern region of Bangladesh. *American Journal of Life Sciences.* 1(4): 155-164.
26. Rahman, A.H.M.M. (2013). A Checklist of Common Angiosperm Weeds of Rajshahi District, Bangladesh *International Journal of Agricultural and Soll Science.* 1(1): 1-6

27. Rahman, A.H.M.M. (2014). Angiosperm Flora in the Graveyards of Rajshahi City, Bangladesh. Lambert Academic Publishing AG and CO KG. Germany. 197 pages, ISBN 978-3-659-52094-5.
28. Rahman, A.H.M.M. and Rahman, M.M. (2014). An Enumeration of Angiosperm weeds in the Paddy field of Rajshahi, Bangladesh with emphasis on medicinal Plants. Journal of Applied Science And Research, 2(2); 36-42
29. Rahman, A.H.M.M. and Rojonigondha. (2014). Taxonomy and Traditional Medicine Practices on Malvaceae (Mallow Family) of Rajshahi, Bangladesh. Open Journal of Botany. 1(2): 19-24.
30. Rahman, A.H.M.M., Afsana, M.W. and Islam, A.K.M.R. (2014). Taxonomy and Medicinal Uses on Acanthaceae Family of Rajshahi, Bangladesh. Journal of Applied Science And Research.2(1): 82-93.
31. Rahman, A.H.M.M., Alam, M. S., Khan, S. K., Ahmed, F., Islam, A. K. M. R. and Rahman, M. M. (2008). Taxonomic Studies on the family Asteraceae (Compositae) of the Rajshahi Division. Research Journal of Agriculture and Biological Sciences. 4(2): 134-140.
32. Rahman, A.H.M.M., Anisuzzaman, M., Alam. M. Z... Islam. A. K. M. R. and Zaman, A. T. M. N. (2006). Taxonomic Studies of the Cucurbits Grown in the Northern Parts of Bangladesh. Research Journal of Agriculture and Biological Sciences. 2(6): 299-302.
33. Rahman, A.H.M.M., Anisuzzaman, M., Alam. M. Z., Islam, A. K. M. R. and Zaman, A. T. M. N. (2006). Taxonomic Studies of the Cucurbits Grown in the Northern Parts of Bangladesh. Research Journal of Agriculture and Biological Sciences. 2(6): 299-302.
34. Rahman, A.H.M.M., Ferdous. Z. and Islam. A. K. M. R. (2014).A Preliminary Assessment of Angiosperm Flora of Bangladesh Police Academy. Research in Plant Sciences.1(1): 9-15.
35. Rahman, A.H.M.M., Hossain. M., M. and Islam, A.K.M.R. (2014). Taxonomy and Medicinal Uses of Angiosperm weeds in the wheat field of Rajshahi, Bangladesh, Frontiers of Biological and Life Sciences. 2(1): 8-11.
36. Rahman, A.H.M.M., Isalm, A.K.M.R. and Rahman, M.A. (2011). The Family Asteraceae of Rajshahi Division, Bangladesh. VDM Verlag Dr. Muller ek. Publishers, Germany 304 pages. ISBN 978-3-639-37815-3.
37. Rahman, A.H.M.M., Islam, A.K.M.R. and Hossain, M. M. (2013). Taxonomy of Cucurbitaceae: Taxonomic investigation of wild and cultivated cucurbits of Northern parts of Bangladesh. Lambert Academic Publishing AG and CO KG. Germany. 176 pages, ISBN 978-3-845-42855-0.
38. Rahman, A.H.M.M., Islam, A. K. M. R. and Naderuzzaman, A. T. M. (2007). Studies on the herbaceous plant species in the graveyard areas of Rajshahi city. Plant Environment Development. 1(1): 57-60.
39. Rahman, A.H.M.M., Nitu, S.K., Ferdows, Z. and Islam, A.K.M.R. (2013). Medico-botany on herbaceous plants of Rajshahi, Bangladesh. American Journal of Life Sciences. 1(3): 136-144.
40. Rahman, A.H.M.M... Islam A.K. M. R... Naderizzaman. A. T. M. Hossain, M. D. and Afza, R. (2007). Studies on the Aquatic Angiosperms of the Rajshahi University Campus Research Journal of Agriculture and Biological Sciences. 3(5): 474-480.
41. Rahman, A.H.M.M. (2013). Angiospermic flora of Rajshahi district, Bangladesh American Journal of Life Sciences. 1(3): 105-112.

42. Rahman, A.H.M.M. and Akter, M. (2013). Taxonomy and Medicinal Uses of Euphorbiaceae (Spurge) Family of Rajshahi, Bangladesh. *Research in Plant Sciences*. 1(3): 74-80.
43. Rahman, A.H.M.M. and Akter, M. (2013). Taxonomy and Medicinal Uses of Euphorbiaceae (Spurge) Family of Rajshahi, Bangladesh. *Research in Plant Sciences*. 1(3): 74-80.
44. Rahman, A.H.M.M. (2013). Assessment of Angiosperm Weeds of Rajshahi, Bangladesh with emphasis on medicinal plants *Research in Plant Sciences*. 1(3): 62-67.
45. Rahman, A.H.M.M. and Gulshana, M.F.A. (2014). Taxonomy and Medicinal Uses on Amaranthaceae Family of Rajshahi, Bangladesh *Applied Ecology and Environmental Sciences*. 2(2): 54-59
46. Rahman, A.H.M.M. and Khanom, A. (2013). Taxonomic and Ethno-Medicinal Study of Species from Moraceae (Mulberry) Family in Bangladesh Flora *Research in Plant Sciences*. 1(3): 53-57.
47. Rahman, A.H.M.M. (2013). Systematic studies on Cucurbitaceae family at Rajshahi division, Bangladesh. *Plant*. 1(2): 10-15.
48. Rahman, M.O. and Alam, M.T. (2013). A taxonomic study on the angiosperm flora of Trishal Upazilla, Mymensingh. *Dhaka Univ. J. Biol. Sci.* 22(1): 63-74.
49. Rahman, M.O. and Hassan, M.A. (1995). Angiospermic flora of Bhawal National Park, Gazipur (Bangladesh). *Bangladesh J. Plant Taxon.* 2(1and2): 47-79.
50. Rahman, M.O. and Alam, M.T. (2013). A taxonomic study on the angiosperm flora of Trishal Upazilla, Mymensingh. *Dhaka Univ. J. Biol. Sci.* 22(1): 63-74.
51. Rahman, M.O., Uddin, M.Z., Tutul, E. Begum, M. and Hassan, M.A. (2010). Additions to the Angiospermic Flora of Runtia Sal Forest, Bangladesh. *Bangladesh J. Plant Taxon.* 17(2): 167-182.
52. Tutul, E., Uddin, M.Z., Rahman, M.O. and Hassan, M.A. (2010). Angiospermic Flora of Runtia Sal Forest, Bangladesh. II. Magnoliopsida (Dicots), *Bangladesh J. Plant Taxon.* 17(1): 33-54.
53. Uddin, M.Z. Alam, MF., Rahman, M.A. and Hassan, M.A. (2013). Diversity in Angiosperm Flora of Teknaf Wildlife Sanctuary, Bangladesh. *Bangladesh J. Plant Taxon.* 20(2): 145-162.
54. 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.
55. Uddin, S.N. and Hassan, M.A. (2012). Angiosperm Flora of Rampahar Reserve Forest under Rangamati District in Bangladesh. 1. Liliopsida (Monocots). *Bangladesh J. Plant Taxon.* 19(1): 37-44.
56. Yusuf, M., Wahab, M.A., Choudhury, J.U. and Begum, J. (2006). Ethno-medico-botanical knowledge from Kaukhali proper and Betunia of Rangamati district. *Bangladesh J. Plant Taxon.* 13(1): 55-61.