

A TAXONOMIC STUDY ON THE ANGIOSPERM FLORA OF TRISHAL UPAZILA, MYMENSINGH

M. OLIUR RAHMAN* AND MD. TAUHIDUL ALAM

Department of Botany, University of Dhaka, Dhaka-1000, Bangladesh

Key words: Floristics, Taxonomy, Angiosperms, Trishal, Bangladesh

Abstract

Trishal Upazila has been floristically explored to make an inventory, identify and document the angiosperm flora. A total of 209 species under 171 genera and 69 families have been identified. Magnoliopsida (Dicots) is represented by 163 species distributed in 133 genera and 54 families, and Liliopsida (Monocots) is constituted by 46 species under 38 genera and 15 families. In Magnoliopsida Asteraceae with 12 species and in Liliopsida Poaceae with 11 species is found as the largest family. The genus *Ficus* and the genus *Fimbristylis* stand the first position, respectively in dicots and monocots. Herbs are represented by 124 species, shrubs by 36 species and trees by 49 species.

Introduction

Under the auspices of the Convention of Biological Diversity (CBD), the importance of taxonomy and floristic studies has been recognized recently by the Parties (i.e. the signatory countries), who recognized that the combination of inadequate taxonomic knowledge, the shortage of systematists and the inadequacy of sampling, collections, and infrastructure constituted a taxonomic impediment. In order to implement the CBD, the need for taxonomic and floristic knowledge as a means of underpinning biodiversity conservation is now widely accepted by governments⁽¹⁾.

Trishal with an area of 338.98 km² is one of the important Upazilas of Mymensingh district and is bounded on the north by Mymensingh Sadar Upazila, on the east by Goforgaon Upazila, on the south by Bhaluca Upazila and on the west by Fulbaria Upazila. The Upazila consists of 12 unions, namely Amirabari, Bailar, Balipara, Dhanikhola, Harirampur, Kanihari, Kanthal, Modbari, Mukshapur, Rampur, Sakhua and Trishal proper. Trishal Upazila has the same climatic condition as other parts of the district. The monthly minimum temperature of the area ranges from 11.7 to 26.6°C, while the maximum temperature varies from 24.0 to 32.4°C. The annual rainfall of the area is approximately 2,095 mm. Monthly average relative humidity varies from 74 to 87% throughout the year⁽²⁾. The Upazila provides different types of habitats and ecosystems

*Author for correspondence: <dr_oliur@yahoo.com>.

including wetland, cultivated land, *char*, homestead area, scrub jungles, fallow lands etc. which offer luxuriant formation of angiosperm flora that play an important role in the local economy, environment and primary health care system.

The importance of studying floristic diversity in Bangladesh has long been realized. In the recent years several attempts have been made on floristic studies in different parts of the country⁽³⁻⁴⁾ including some protected areas⁽⁵⁻⁷⁾. However, no floristic study on Trishal Upazila has been carried out so far. The main objectives of the present study are to explore, identify and document the angiosperms including both wild and cultivated species of Trishal Upazila.

Materials and Methods

The work is based on fresh materials collected from Trishal Upazila during five botanical expeditions from October, 2011 to September, 2012 covering all seasons. Plant specimens were collected from different areas of the Upazila and processed using standard herbarium techniques⁽⁸⁾. The collected specimens have been critically studied and examined at the Department of Botany, University of Dhaka. Identifications were confirmed by matching the identified specimens housed at Dhaka University Salar Khan Herbarium (DUSH), and by consulting standard floras and recent literatures⁽⁹⁻¹⁶⁾. Voucher specimens have been deposited in DUSH.

Results and Discussion

A total of 209 species distributed under 171 genera and 69 families have been identified from Trishal Upazila. The species along with the family name, local name and habit are listed in Table 1. Magnoliopsida is represented by 163 species under 133 genera and 54 families, while Liliopsida by 46 species distributed in 38 genera and 15 families. Herbs are represented by 124 species (59%), shrubs by 36 species (17%) and trees by 49 species (24%).

The number of species in 69 families varies from 1 to 12. Asteraceae with 12 species under 11 genera is the largest family in Magnoliopsida, which is followed by Fabaceae with 9 species under 6 genera. In Liliopsida Poaceae appears to be the largest family consisting of 11 species and 10 genera, and followed by Araceae with 8 species distributed in 7 genera. Ten largest families in the flora of Trishal Upazila along with the number of genera and species are shown in Fig. 1. These ten families comprise 81 species that represent about 39% of the total species identified. The remaining 59 families with a total 128 species represent 61% of the total.

In Magnoliopsida, 18 families (*viz.*, Basellaceae, Bombacaceae, Brassicaceae, Caryophyllaceae, Chenopodiaceae, Elaeocarpaceae, Flacourtiaceae, Lauraceae, Leeaceae, Menyanthaceae, Moringaceae, Nyctaginaceae, Nymphaeaceae, Oxalidaceae, Passifloraceae, Rhamnaceae, Sphenocleaceae and Tiliaceae) are represented by single species.

Table 1. List of species in Trishal Upazila along with family name, local name, habit and voucher specimen.

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
1	<i>Abroma augusta</i> (L.) L. f.	Sterculiaceae	Ulotkombol	Shrub	Tauhid 116 (DUSH)
2	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Potari	Herb	Tauhid 167 (DUSH)
3	<i>Acacia auriculiformis</i> A. Cunn.	Mimosaceae	Akashmoni	Tree	Tauhid 312 (DUSH)
4	<i>Achyranthes aspera</i> L.	Amaranthaceae	Apang	Herb	Tauhid 370 (DUSH)
5	<i>Ageratum conyzoides</i> L.	Asteraceae	Fulkuri	Herb	Tauhid 191 (DUSH)
6	<i>Albizia niopoides</i> (Spruce ex Benth.) Burkart	Mimosaceae	Gogon shirish	Tree	Tauhid 163 (DUSH)
7	<i>Alocasia formicata</i> (Roxb.) Schott	Araceae	Salukachu	Herb	Tauhid 399 (DUSH)
8	<i>A. macrorrhizos</i> (L.) G. Don	Araceae	Mankachu	Herb	Tauhid 338 (DUSH)
9	<i>Aloe vera</i> (L.) Brum. f.	Aloaceae	Gritokumari	Herb	Tauhid 331 (DUSH)
10	<i>Alpinia nigra</i> (Gaertn.) B. L. Burtt.	Zingiberaceae	Tara	Herb	Tauhid 121 (DUSH)
11	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	Chatim	Tree	Tauhid 181 (DUSH)
12	<i>Alternanthera paronichyoides</i> A. St.- Hil.	Amaranthaceae	Jhulikhata	Herb	Tauhid 89 (DUSH)
13	<i>A. sessilis</i> (L.) R. Br. ex DC.	Amaranthaceae	Chanchi	Herb	Tauhid 19 (DUSH)
14	<i>Amaranthus dubius</i> Mart. ex Thell.	Amaranthaceae	Not known	Herb	Tauhid 204 (DUSH)
15	<i>A. spinosus</i> L.	Amaranthaceae	Kantanotey	Herb	Tauhid 355 (DUSH)
16	<i>A. viridis</i> L.	Amaranthaceae	Notey shak	Herb	Tauhid 108 (DUSH)
17	<i>Anisomeles indica</i> (L.) O. Kuntze	Lamiaceae	Thokma	Herb	Tauhid 37 (DUSH)
18	<i>Annona reticulata</i> L.	Annonaceae	Nona	Tree	Tauhid 230 (DUSH)
19	<i>Aphanamixis polystachya</i> (Wall.) R. Parker	Meliaceae	Royna	Tree	Tauhid 243 (DUSH)
20	<i>Argyreia nervosa</i> (Burm. f.) Boj.	Convolvulaceae	Bara dudhi	Herb	Tauhid 267 (DUSH)
21	<i>Artocarpus heterophyllus</i> Lamk.	Moraceae	Kanthal	Tree	Tauhid 288 (DUSH)
22	<i>A. lakucha</i> Buch.- Ham.	Moraceae	Deua	Tree	Tauhid 377 (DUSH)
23	<i>Axonopus compressus</i> (Swartz) P. Beauv.	Poaceae	Ghoradubo har	Herb	Tauhid 21 (DUSH)
24	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Tree	Tauhid 227 (DUSH)
25	<i>Bambusa balcooa</i> Roxb.	Poaceae	Barakbans	Herb	Tauhid 411 (DUSH)
26	<i>B. bambos</i> (L.) Voss	Poaceae	Bans	Herb	Tauhid 412 (DUSH)
27	<i>Basella alba</i> L.	Basellaceae	Puishak	Herb	Tauhid 334 (DUSH)

(Contd.)

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
28	<i>Blumea lacera</i> (Burm. f.) DC.	Asteraceae	Kukurshunga	Herb	Tauhid 193 (DUSH)
29	<i>B. membranacea</i> Wall. ex DC.	Asteraceae	Not known	Herb	Tauhid 62 (DUSH)
30	<i>Bombax ceiba</i> L.	Bombacaceae	Shimul	Tree	Tauhid 215 (DUSH)
31	<i>Borassus flabellifer</i> L.	Arecaaceae	Tal	Tree	Tauhid 303 (DUSH)
32	<i>Bougainvillea glabra</i> Choisy	Lythraceae	Baganbilash	Tree	Tauhid 264 (DUSH)
33	<i>Butea monosperma</i> (Lamk.) Taub.	Fabaceae	Polash	Tree	Tauhid 139 (DUSH)
34	<i>Calotropis gigantea</i> (L.) R. Br.	Asclepiadaceae	Boro akonda	Shrub	Tauhid 249 (DUSH)
35	<i>C. procera</i> (Ait.) R. Br.	Asclepiadaceae	Akando	Shrub	Tauhid 271 (DUSH)
36	<i>Cardiospermum halicacabum</i> L.	Sapindaceae	Phutka	Herb	Tauhid 160 (DUSH)
37	<i>Caryota mitis</i> Lour.	Areceae	Not known	Tree	Tauhid 336 (DUSH)
38	<i>Cassia fistula</i> L.	Caesalpiniaceae	Sonalu	Tree	Tauhid 129 (DUSH)
39	<i>Cayratia trifolia</i> (L.) Domin	Vitaceae	Amal lata	Herb	Tauhid 176 (DUSH)
40	<i>Centella asiatica</i> (L.) Urban	Apiaceae	Thankuni	Herb	Tauhid 223 (DUSH)
41	<i>Centipeda minima</i> (L.) A. Br. & Aschers.	Asteraceae	Machitti	Herb	Tauhid 23 (DUSH)
42	<i>Chenopodium ambrosioides</i> L.	Chenopodiaceae	Chandanbetu	Herb	Tauhid 175 (DUSH)
43	<i>Chromolaena odorata</i> (L.) King & Robinson	Asteraceae	German lata	Shrub	Tauhid 201 (DUSH)
44	<i>Chrozophora rottleri</i> (Geiseler) A. Juss. ex Spreng.	Euphorbiaceae	Khudi okra	Herb	Tauhid 100 (DUSH)
45	<i>Cissus adnata</i> Roxb.	Vitaceae	Alianga lata	Herb	Tauhid 179 (DUSH)
46	<i>Citrus aurantifolia</i> (Christm. & Panzer) Swingle	Rutaceae	Kagagilebu	Shrub	Tauhid 388 (DUSH)
47	<i>C. limon</i> (L.) Burm. f.	Rutaceae	Goralebu	Tree	Tauhid 311 (DUSH)
48	<i>C. maxima</i> (Burm.) Merr.	Rutaceae	Jambura	Shrub	Tauhid 275 (DUSH)
49	<i>Clerodendrum inermae</i> (L.) Gaertn.	Verbenaceae	Bamjui	Shrub	Tauhid 239 (DUSH)
50	<i>C. viscosum</i> Vent	Verbenaceae	Bhat	Herb	Tauhid 257 (DUSH)
51	<i>Coccinia grandis</i> (L.) Voigt	Cucurbitaceae	Telakucha	Herb	Tauhid 173 (DUSH)
52	<i>Codiaeum variegatum</i> (L.) A. Juss.	Euphorbiaceae	Patabahar	Herb	Tauhid 316 (DUSH)
53	<i>Colocasia esculenta</i> (L.) Schott.	Araceae	Kochu	Herb	Tauhid 109 (DUSH)
54	<i>Commelina benghalensis</i> L.	Commelinaceae	Kanchira	Herb	Tauhid 361 (DUSH)

(Contd.)

ANGIOSPERM FLORA OF TRISHAL UPAZILA

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
55	<i>C. longifolia</i> Lamk.	Commelinaceae	Panikanchira	Herb	Tauhid 59 (DUSH)
56	<i>Costus speciosus</i> Sm.	Costaceae	Kushtha	Herb	Tauhid 06 (DUSH)
57	<i>Combretum pilosum</i> Roxb.	Combretaceae	Jhuni ugur	Shrub	Tauhid 340 (DUSH)
58	<i>Crotalaria pallida</i> Ait.	Fabaceae	Jhunjhuna	Herb	Tauhid 273 (DUSH)
59	<i>Croton bonplandianus</i> Baill.	Euphorbiaceae	Croton	Herb	Tauhid 18 (DUSH)
60	<i>Curcuma zedoaria</i> (Christm.) Rosc.	Zingiberaceae	Shoti	Herb	Tauhid 17 (DUSH)
61	<i>Cyathula prostrata</i> (L.) Blume	Amaranthaceae	Not known	Herb	Tauhid 394 (DUSH)
62	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	Shishu	Tree	Tauhid 277 (DUSH)
63	<i>Datura metel</i> L.	Solanaceae	Dhutra	Shrub	Tauhid 325 (DUSH)
64	<i>Dentella repens</i> (L.) J. R. & G. Forst.	Rubiaceae	Bhuiapat	Herb	Tauhid 398 (DUSH)
65	<i>D. serpyllifolia</i> Wall. ex Craib	Rubiaceae	Bhuiapat	Herb	Tauhid 102 (DUSH)
66	<i>Duranta repens</i> L.	Dilleniaceae	Duronto	Herb	Tauhid 390 (DUSH)
67	<i>Dioscorea alata</i> L.	Dioscoreaceae	Guraniya alu	Herb	Tauhid 34 (DUSH)
68	<i>D. kamoonsensis</i> Kunth	Dioscoreaceae	Erabera lata	Herb	Tauhid 342 (DUSH)
69	<i>Ecbolium ligustrinum</i> (Vahl) Vollesen	Acanthaceae	Udujati	Shrub	Tauhid 16 (DUSH)
70	<i>Eclipta prostrata</i> (L.) Mant.	Asteraceae	Kalokeshi	Herb	Tauhid 84 (DUSH)
71	<i>Eichhornia crassipes</i> (Mart.) Solms	Pontederiaceae	Kochuripana	Herb	Tauhid 213 (DUSH)
72	<i>Elaeocarpus floribundus</i> Blume	Elaeocarpaceae	Belphoi	Tree	Tauhid 123 (DUSH)
73	<i>Eragrostis unioloides</i> (Retz.) Nees ex Steud.	Poaceae	Not known	Herb	Tauhid 294 (DUSH)
74	<i>Eryngium foetidum</i> L.	Apiaceae	Not known	Herb	Tauhid 113 (DUSH)
75	<i>Erythrina fusca</i> Lour.	Fabaceae	Kanta mandar	Tree	Tauhid 120 (DUSH)
76	<i>E. stricta</i> Roxb.	Fabaceae	Teliemandar	Tree	Tauhid 127 (DUSH)
77	<i>E. variegata</i> L.	Fabaceae	Madar	Tree	Tauhid 246 (DUSH)
78	<i>Evolvulus nummularius</i> (L.) L.	Convolvulaceae	Buiokra	Herb	Tauhid 307 (DUSH)
79	<i>Ficus benghalensis</i> L.	Moraceae	Bot	Tree	Tauhid 397 (DUSH)
80	<i>F. hispida</i> L. f.	Moraceae	Kakdumur	Tree	Tauhid 237 (DUSH)
81	<i>F. recemosa</i> L.	Moraceae	Jagdumur	Tree	Tauhid 272 (DUSH)

(Contd.)

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
82	<i>F. rumphii</i> Bl.	Moraceae	Hijulia	Tree	Tauhid 274 (DUSH)

RAHMAN AND ALAM

83	<i>Fimbristylis bisumbellata</i> (Forsk.) Bubani	Cyperaceae	Not known	Herb	Tauhid 24 (DUSH)
84	<i>F. dichotoma</i> (L.) Vahl	Cyperaceae	Baranirbishi	Herb	Tauhid 211 (DUSH)
85	<i>F. squarrosa</i> Vahl	Cyperaceae	Not known	Herb	Tauhid 44 (DUSH)
86	<i>Flacourtia indica</i> (Burm. f.) Merril	Flacourtiaceae	Beuchi	Shrub	Tauhid 08 (DUSH)
87	<i>Gardenia augusta</i> (L.) Merr.	Rubiaceae	Gondhoraj	Shrub	Tauhid 110 (DUSH)
88	<i>Glinus lotoides</i> L.	Molluginaceae	Alugash	Herb	Tauhid 25 (DUSH)
89	<i>Glycosmis pentaphylla</i> (Retz.) A. DC	Rutaceae	Datmajan	Tree	Tauhid 254 (DUSH)
90	<i>Grewia nervosa</i> (Lour.) Panigr.	Tiliaceae	Asar	Shrub	Tauhid 02 (DUSH)
91	<i>Hedyotis corymbosa</i> (L.) Lamk	Rubiaceae	Khet papra	Herb	Tauhid 406 (DUSH)
92	<i>Heliotropium indicum</i> L.	Boraginaceae	Hatishur	Herb	Tauhid 76 (DUSH)
93	<i>H. ovalifolium</i> Forssk.	Boraginaceae	Nagaphuli	Herb	Tauhid 87 (DUSH)
94	<i>Hemarthria protensa</i> Steud.	Poaceae	Chailla	Herb	Tauhid 103 (DUSH)
95	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Joba	Shrub	Tauhid 107 (DUSH)
96	<i>Holarrhena antidysenterica</i> (L.) Wall. ex Decne.	Apocynaceae	Kurchi	Tree	Tauhid 04 (DUSH)
97	<i>Hydrilla verticiliata</i> (L. f.) Royle.	Hydrocharitaceae	Kureli	Herb	Tauhid 225 (DUSH)
98	<i>Hygrophila schulli</i> (Buch.-Hum.) M. R. Almeida & S. M. Almeida	Acanthaceae	<i>Talmakhna</i>	Herb	Tauhid 192 (DUSH)
99	<i>Imperata cylindrica</i> (L.) P. Beauv.	Poaceae	Kash	Herb	Tauhid 40 (DUSH)
100	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	Kolmishak	Herb	Tauhid 206 (DUSH)
101	<i>I. fistulosa</i> Mart. ex Choisy	Convolvulaceae	Dolkolmi	Shrub	Tauhid 169 (DUSH)
102	<i>Jatropha gossypifolia</i> L.	Euphorbiaceae	Lal bherenda	Shrub	Tauhid 403 (DUSH)
103	<i>Justicia adhatoda</i> L.	Acanthaceae	Bashok	Shrub	Tauhid 42 (DUSH)
104	<i>J. gendarussa</i> L.	Acanthaceae	Jagadmadan	Shrub	Tauhid 50 (DUSH)
105	<i>Kyllinga brevifolia</i> Robbt.	Cyperaceae	Bindimuthi	Shrub	Tauhid 345 (DUSH)
106	<i>K. nemoralis</i> (J.R. Forst & G. Forst.) Dandy ex Hutchins & Dalziel	Cyperaceae	Nirbishi	Herb	Tauhid 298 (DUSH)
107	<i>Lagerstroemia parviflora</i> Roxb.	Lythraceae	Jarul	Tree	Tauhid 147 (DUSH)

(Contd.)

ANGIOSPERM FLORA OF TRISHAL UPAZILA

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
108	<i>Lannea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	Jiga	Tree	Tauhid 251 (DUSH)
109	<i>Laportea interrupta</i> (L.) Chew	Urticaceae	Bichuti	Shrub	Tauhid 349 (DUSH)
110	<i>Lasia spinosa</i> (L.) Thw.	Araceae	Kantakachu	Herb	Tauhid 321 (DUSH)
111	<i>Lawsonia inermis</i> L.	Lythraceae	Mehedi	Shrub	Tauhid 305 (DUSH)
112	<i>Leea indica</i> Merrill	Leeaceae	Kukurjhiwa	Shrub	Tauhid 389 (DUSH)
113	<i>Lemna perpusilla</i> Torrey	Lemnaceae	Khudipana	Herb	Tauhid 32 (DUSH)
114	<i>Leonurus japonicas</i> Houtt.	Lamiaceae	Roktodhron	Herb	Tauhid 343(DUSH)
115	<i>Leucus aspera</i> (Willd.) Link.	Lamiaceae	Dhondokalas	Herb	Tauhid 159 (DUSH)
116	<i>L. indica</i> (L.) R. Br. ex Vatke	Lamiaceae	Shetodron	Herb	Tauhid 01 (DUSH)
117	<i>Limnophila heterophylla</i> Roxb.	Scrophulariaceae	Not known	Herb	Tauhid 409 (DUSH)
118	<i>L. repens</i> (Benth.) Benth.	Scrophulariaceae	Not known	Herb	Tauhid 410 (DUSH)
119	<i>Lindernia antipoda</i> (L.) Alston	Scrophulariaceae	Not known	Herb	Tauhid 219 (DUSH)
120	<i>L. micrantha</i> D. Don	Scrophulariaceae	Not known	Herb	Tauhid 315 (DUSH)
121	<i>L. rotundifolia</i> (L.) Alston	Scrophulariaceae	Not known	Herb	Tauhid 91 (DUSH)
122	<i>Lippia alba</i> (Mill.) N. E. Br. ex Briton & P. Wilson	Verbenaceae	Pichas-lakri	Herb	Tauhid 86 (DUSH)
123	<i>Litchi chinensis</i> Sonn.	Sapindaceae	Lichu	Tree	Tauhid 284 (DUSH)
124	<i>Litsea monopetala</i> (Roxb.) Pers.	Lauraceae	Akorma	Tree	Tauhid 13 (DUSH)
125	<i>Ludwigia adscendens</i> (L.) Hara	Onagraceae	Kesardam	Herb	Tauhid 195 (DUSH)
126	<i>L. hyssopifolia</i> (G. Don) Exell Apud A. & R. Fernandes	Onagraceae	Not known	Herb	Tauhid 292 (DUSH)
127	<i>Mangifera indica</i> L.	Anacardiaceae	Aam	Tree	Tauhid 197 (DUSH)
128	<i>Maranta arundinacea</i> L.	Marantaceae	Araroot	Herb	Tauhid 253 (DUSH)
129	<i>Melia azedarach</i> L.	Meliaceae	Goranim	Tree	Tauhid 136 (DUSH)
130	<i>Melochia corchorifolia</i> L.	Sterculiaceae	Tikiokra	Herb	Tauhid 350 (DUSH)
131	<i>Meyna pubescens</i> (Kurz) Robyns	Rubiaceae	Not known	Shrub	Tauhid 110 (DUSH)
132	<i>Mikania cordata</i> (Burm. f.) Robinson	Asteraceae	Assam lata	Climber	Tauhid 58 (DUSH)

(Contd.)

RAHMAN AND ALAM

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
133	<i>Miliusa velutina</i> (Dunal) Hook. f. & Thom.	Annonaceae	Gandhi-gajari	Tree	Tauhid 05 (DUSH)
134	<i>Mimosa pudica</i> L.	Mimosaceae	Lajjabati	Herb	Tauhid 35 (DUSH)
135	<i>Momordica charantia</i> L. var. <i>charantia</i> C. B. Clarke	Cucurbitaceae	Korolla	Herb	Tauhid 242 (DUSH)
136	<i>Monochoria hastata</i> (L.) Solms	Pontederiaceae	Baranukha	Herb	Tauhid 200 (DUSH)
137	<i>Moringa oleifera</i> Lamk.	Moringaceae	Sajna	Tree	Tauhid 145 (DUSH)
138	<i>Morus alba</i> L.	Moraceae	Tut	Tree	Tauhid 366 (DUSH)
139	<i>Mukia maderaspatana</i> (L.) M. Roem.	Cucurbitaceae	Agmukhi	Herb	Tauhid 202 (DUSH)
140	<i>Murdania nodiflora</i> (L.) Brenan	Commelinaceae	Kureli	Herb	Tauhid 356 (DUSH)
141	<i>Murraya paniculata</i> (L.) Jack	Rutaceae	Kamini	Shrub	Tauhid 265 (DUSH)
142	<i>Najas indica</i> (Willd.) Cham.	Najadaceae	Not known	Herb	Tauhid 242 (DUSH)
143	<i>Nechanandra alternifolia</i> (Roxb.) Thw.	Hydrocharitaceae	Rasnajhangi	Herb	Tauhid 349 (DUSH)
144	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	Sadashapla	Herb	Tauhid 385 (DUSH)
145	<i>Nymphoides indicum</i> (L.) O. Kuntze	Menyanthaceae	Panchuli	Herb	Tauhid 408 (DUSH)
146	<i>Ocimum americanum</i> L.	Lamiaceae	Bantulshi	Herb	Tauhid 170 (DUSH)
147	<i>O. tenuiflorum</i> L.	Lamiaceae	Tulshi	Herb	Tauhid 270 (DUSH)
148	<i>Oplismenus burmannii</i> (Rtez.) P. Beauv.	Poaceae	Not known	Herb	Tauhid 314 (DUSH)
149	<i>Oxalis corniculata</i> L.	Oxalidaceae	Amrul	Herb	Tauhid 03 (DUSH)
150	<i>Pancreatium verecandum</i> Ait.	Liliaceae	Kumur	Herb	Tauhid 112 (DUSH)
151	<i>Passiflora edulis</i> Sims.	Passifloraceae	Tangphal	Herb	Tauhid 244 (DUSH)
152	<i>Pedilanthus tithymaloides</i> Poit.	Euphorbiaceae	Rangchita	Herb	Tauhid 396 (DUSH)
153	<i>Peperomia pellucida</i> (L.) H. B. & K.	Piperaceae	Luchipata	Herb	Tauhid 310 (DUSH)
154	<i>Persicaria hydropiper</i> (L.) Spach.	Polygonaceae	Bishkatali	Herb	Tauhid 88 (DUSH)
155	<i>P. viscosa</i> (Buch.-Ham. ex D. Don) Nakai	Polygonaceae	Not known	Herb	Tauhid 96 (DUSH)
156	<i>Phoenix sylvestris</i> Roxb.	Arecaceae	Khejur	Tree	Tauhid 134 (DUSH)
157	<i>Physalis angulata</i> L.	Solanaceae	Bantepari	Herb	Tauhid 322 (DUSH)
158	<i>Piper sylvaticum</i> Roxb.	Piperaceae	Ban pan	Shrub	Tauhid 245 (DUSH)
159	<i>Pistia stratiotes</i> L.	Araceae	Topapana	Herb	Tauhid 209 (DUSH)

(Contd.)

ANGIOSPERM FLORA OF TRISHAL UPAZILA

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
160	<i>Polyalthia longifolia</i> (Sonn.) Thw.	Annonaceae	Debdaru	Tree	Tauhid 346 (DUSH)
161	<i>Polycarpon prostratum</i> (Forssk.) Aschers. & Schweinf.	Caryophyllaceae	Gima shak	Herb	Tauhid 73 (DUSH)
162	<i>Polygonum plebeium</i> R. Br.	Polygonaceae	Anjaban	Herb	Tauhid 74 (DUSH)
163	<i>Pothos scandens</i> L.	Araceae	Batilata	Herb	Tauhid 124 (DUSH)
164	<i>Pouzolzia zeylanica</i> (L.) Benn. & R. Br.	Urticaceae	Kullaruki	Herb	Tauhid 20 (DUSH)
165	<i>Psidium guajava</i> L.	Myrtaceae	Peyara	Tree	Tauhid 143 (DUSH)
166	<i>Ricinus communis</i> L.	Euphorbiaceae	Rerhi	Shrub	Tauhid 161 (DUSH)
167	<i>Rorippa indica</i> (L.) Hiern.	Brassicaceae	Bonsharisha	Herb	Tauhid 65 (DUSH)
168	<i>Rumex dentatus</i> L.	Polygonaceae	Banpalang	Herb	Tauhid 64 (DUSH)
169	<i>Saccharum spontaneum</i> L.	Poaceae	Kash	Herb	Tauhid 286 (DUSH)
170	<i>Sagittaria guayanensis</i> H.B. & K. subsp. <i>lappula</i> (D. Don) Bogin	Alismataceae	Kaowathukri	Herb	Tauhid 386 (DUSH)
171	<i>S. sagittifolia</i> L.	Alismataceae	Chhotokut	Herb	Tauhid 323 (DUSH)
172	<i>Salvia plebeia</i> R. Br.	Lamiaceae	Bhuitulshi	Herb	Tauhid 68 (DUSH)
173	<i>Saraca indica</i> L.	Caesalpiniaceae	Ashoke	Tree	Tauhid 364 (DUSH)
174	<i>Schumannianthus dichotomus</i> (Roxb.) Gagnep.	Marantaceae	Shitalpati	Shrub	Tauhid 79 (DUSH)
175	<i>Scoparia dulcis</i> L.	Scrophulariaceae	Bondhoney	Herb	Tauhid 41 (DUSH)
176	<i>Senna sophera</i> (L.) Roxb.	Caesalpiniaceae	Chotokolkeshunda	Shrub	Tauhid 174 (DUSH)
177	<i>S. tora</i> (L.) Roxb.	Caesalpiniaceae	Chakunda	Herb	Tauhid 149 (DUSH)
178	<i>Sesbabina bispinosa</i> (Jacq.) Wight	Fabaceae	Dhaincha	Herb	Tauhid 242 (DUSH)
179	<i>S. grandiflora</i> (L.) Poir.	Fabaceae	Bakphul	Shrub	Tauhid 131 (DUSH)
180	<i>Sida rhombifolia</i> (L.) Pers.	Malvaceae	Lalberela	Herb	Tauhid 353 (DUSH)
181	<i>Solanum myriacanthum</i> Dunal	Solanaceae	Rulpuk	Shrub	Tauhid 153 (DUSH)
182	<i>S. sisymbriifolium</i> Lamk.	Solanaceae	Kanta begun	Herb	Tauhid 302 (DUSH)
183	<i>S. violaceum</i> Ortega	Solanaceae	Byakur	Herb	Tauhid 126 (DUSH)
184	<i>Spermacoce alata</i> Aubl.	Rubiaceae	Ghuioijhil shak	Herb	Tauhid 29 (DUSH)

(Contd.)

RAHMAN AND ALAM

No.	Botanical name	Family name	Local name	Habit	Voucher specimen
185	<i>Sphaeranthus africanus</i> L.	Asteraceae	Not known	Herb	Tauhid 81 (DUSH)
186	<i>Sphenoclea zeylanica</i> Gaertn.	Sphenocleaceae	Jhil marich	Herb	Tauhid 11 (DUSH)
187	<i>Spilanthes calva</i> DC.	Asteraceae	Marhatitiga	Herb	Tauhid 208 (DUSH)
188	<i>Sporolobus diander</i> (Retz.) P. Beauv.	Poaceae	Benajoni	Herb	Tauhid 381 (DUSH)
189	<i>Stephania japonica</i> (Thunb.) Miers	Menispermaceae	Nimukha	Herb	Tauhid 70 (DUSH)
190	<i>Streblus asper</i> Lour.	Moraceae	Sheora	Tree	Tauhid 269 (DUSH)
191	<i>Swietenia macrophylla</i> King	Meliaceae	Mehogoni	Tree	Tauhid 266 (DUSH)
192	<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae	Not known	Herb	Tauhid 348 (DUSH)
193	<i>Syngonium podophyllum</i> Schott	Araceae	Not known	Herb	Tauhid 332 (DUSH)
194	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	Kalojam	Tree	Tauhid 259 (DUSH)
195	<i>S. fruticosum</i> DC.	Myrtaceae	Bonjam	Tree	Tauhid 268 (DUSH)
196	<i>Tabernaemontana divaricata</i> (L.) R. Br. ex Roem. & Schult.	Apocynaceae	Dudhphul	Shrub	Tauhid 301 (DUSH)
197	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Tentul	Tree	Tauhid 392 (DUSH)
198	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Combretaceae	Arjun	Tree	Tauhid 122 (DUSH)
199	<i>Thevetia peruviana</i> (Pers.) K. Schum.	Apocynaceae	Holde karobi	Tree	Tauhid 382 (DUSH)
200	<i>Tinospora cordifolia</i> Miers	Menispermaceae	Gulancho	Herb	Tauhid 400 (DUSH)
201	<i>Trewia nudiflora</i> L.	Euphorbiaceae	Meragoda	Tree	Tauhid 299 (DUSH)
202	<i>Typhonium trilobatum</i> (L.) Schott	Araceae	Ghetkachu	Herb	Tauhid 56 (DUSH)
203	<i>Urena lobata</i> L.	Malvaceae	Jangli ghagra	Herb	Tauhid 101 (DUSH)
204	<i>Vernonia cinerea</i> (L.) Nees	Asteraceae	Kukshim	Herb	Tauhid 48 (DUSH)
205	<i>Vigna mungo</i> (L.) Hepper	Fabaceae	Mashkalai	Herb	Tauhid 404 (DUSH)
206	<i>Vetiveria zizanioides</i> (L.) Nash	Poaceae	Khuskhus	Herb	Tauhid 97 (DUSH)
207	<i>Xanthium indicum</i> Koen. ex Roxb.	Asteraceae	Gaghra	Herb	Tauhid 330 (DUSH)
208	<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Rutaceae	Bajna	Tree	Tauhid 141 (DUSH)
209	<i>Ziziphus mauritiana</i> Lamk.	Rhamnaceae	Boroi	Tree	Tauhid 184 (DUSH)

In Liliopsida, four families, namely Aloaceae, Costaceae, Liliaceae and Najadaceae are represented by single species. Out of 171 genera identified from the study area *Ficus* with 4 species is found as the largest genus in dicots, while *Fimbristylis* with 3 species appears to be the largest in monocots.

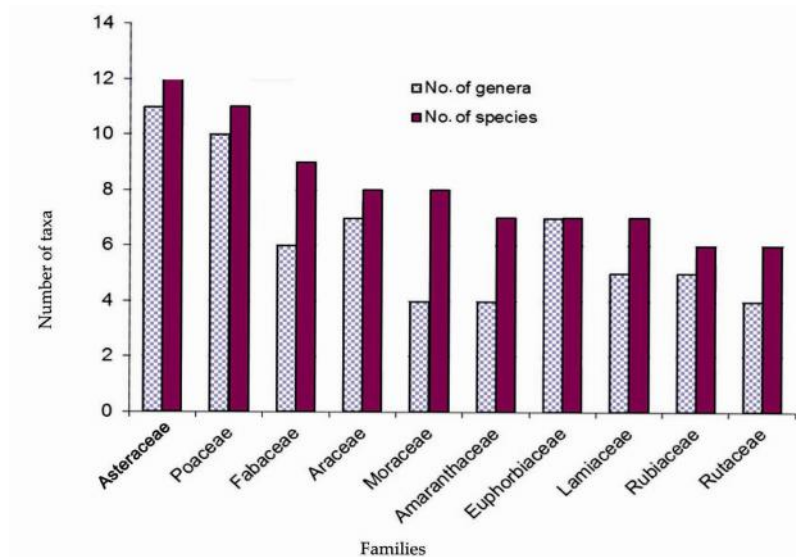


Fig. 1. Ten largest families in the flora of Trishal Upazila.

The study area presents diverse habitats with different types of vegetation. Some common trees found in the area include *Acacia auriculiformis*, *Albizia procera*, *Aphanamixis polystachya*, *Alstonia scholaris*, *Cassia fistula*, *Dalbergia sissoo*, *Phoenix sylvestris* etc. The species *Heliotropium indicum*, *Croton bonplandianus*, *Leucus aspera*, *Senna tora* are commonly found along the roadsides. In the low-lying areas including beels and other aquatic bodies, 12 aquatic plants are commonly found (e.g. *Eichhornia crassipes*, *Hydrilla verticillata*, *Ipomoea aquatica*, *Lemna perpusilla*, *Limnophila heterophylla*, *Ludwigia adscendens*, *Monochoria hastata*, *Nymphaea pubescens*, *Nymphoides indicum*, *Pistia stratiotes*, *Sagittaria guayanensis* subsp. *lappula* and *Sagittaria sagittifolia*). In this study the species *Alternanthera paronichyoides*, *Cayratia trifolia*, *Dioscorea kamoonsensis*, *Ecbolium ligustrinum*, *Heliotropium ovalifolium* and *Sphenoclea zeylanica* were rarely found in the study area.

In Trishal, modern agriculture, urbanization, lack of knowledge of plant collection technique, lack of awareness and exotic plantation are great threats to its angiosperm flora. Considering the present pace of these threats there is a possibility of losing a number of plant species including medicinal plants even before they are properly identified and studied. To save the naturally growing rare, especially the medicinal plant species in the study area, adequate attention is necessary to take *in situ* and *ex situ* measures for their conservation and sustainable development.

References

1. Heywood V 2004. Modern approaches to floristics and their impact on the region of SW Asia. *Turk. J Bot.* **28**: 7-16.
2. Bangladesh Bureau of Statistics 2011. Monthly Statistical Bulletin, December 2011. Statistics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
3. Moniruzzaman M, MA Hassan, MM Rahman, S Layla and MR Islam 2012. A preliminary checklist of the angiospermic flora of Daulatpur Upazila in Kushtia district, Bangladesh. *J. Asiat. Soc. Bangladesh, Sci.* **38**(1): 53-65.
4. Rahman MO, RT Antara, M Begum and MA Hassan 2012. Floristic diversity of Dhamrai Upazila of Dhaka, Bangladesh with emphasis on medicinal plants. *Bangladesh J. Bot.* **41**(1): 71-85.
5. Rahman MO and MA Hassan 1995. Angiospermic flora of Bhawal National Park, Gazipur (Bangladesh). *Bangladesh J. Plant Taxon.* **2**(1&2): 47-79.
6. Khan MS and AM Huq 2001. The vascular flora of Chunati Wildlife Sanctuary in south Chittagong, Bangladesh. *Bangladesh J. Plant Taxon.* **8**(1): 47-64.
7. Arefin MK, MM Rahman, MZ Uddin and MA Hassan 2011. Angiosperm flora of Satchari National Park, Habiganj, Bangladesh. *Bangladesh J. Plant Taxon.* **18**(2): 117-140.
8. Hyland BPM 1972. A technique for collecting botanical specimens in rain forest. *Flora Malesiana Bulletin* **26**: 2038-2040.
9. Hooker JD 1872-1897. *The Flora of British India*, Vols. **1 - 7**. L. Reeve & Co. Ltd. England.
10. Prain D 1903. *Bengal Plants*. Vols. **1 & 2** (Ind. Repr. 1981). Bishen Singh Mahendra Pal Singh, Dehra Dun, India.
11. Dassanayake MD and FR Fosberg (Eds) 1980-1985. *A Revised Handbook to the Flora of Ceylon*, Vols. **1 - 5**. Amerind Publishing Co. Pvt. Ltd., New Delhi.
12. Khan MS (Ed.) 1972-1987. *Flora of Bangladesh*. Nos. **1 - 39**. Bangladesh National Herbarium, BARC, Dhaka.
13. Khan MS and MM Rahman (Eds) 1989-2002. *Flora of Bangladesh*. Nos. **40 - 53**. Bangladesh National Herbarium, Dhaka.
14. Ahmed ZU, MA Hassan, ZNT Begum, M Khondker, SMH Kabir, M Ahmad, ATA Ahmed, AKA Rahman and EU Haque (Eds) 2007-2009. *Encyclopedia of Flora and Fauna of Bangladesh*, Vols. **6 - 12**. Asiatic Society of Bangladesh, Dhaka.
15. Rashid ME and MA Rahman 2011. Updated nomenclature and taxonomic status of the plants of Bangladesh included in Hook. f., *The Flora of British India: Volume-I*. *Bangladesh J. Plant Taxon.* **18**(2): 177-197.
16. Rashid ME and MA Rahman 2012. Updated nomenclature and taxonomic status of the plants of Bangladesh included in Hook. f., *The Flora of British India: Volume-II*. *Bangladesh J. Plant Taxon.* **19**(2): 173-190.

(Manuscript received on 2 January, 2013; revised on 20 January, 2013)