

## FLORISTIC DIVERSITY OF DHAMRAI UPAZILA OF DHAKA WITH EMPHASIS ON MEDICINAL PLANTS

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### Abstract

A total of 263 angiosperm species under 210 genera and 79 families have been recorded from Dhamrai Upazila of Dhaka district. Of these, Magnoliopsida is represented by 200 species under 154 genera and 62 families while Liliopsida is represented by 63 species under 56 genera and 17 families. Asteraceae is the largest family in Magnoliopsida represented by 17 species, and Poaceae is the largest family in Liliopsida represented by 20 species. Habit analysis shows that herbs, shrubs and trees are represented by 166, 23 and 74 species, respectively. Sixty two medicinal plants have been documented with their uses for the cure of more than 30 diseases, and some of these are diabetes, jaundice, diarrhoea, dysentery, spleen and liver complaints, chronic ulcers, bronchitis, rheumatism, irregular menstruation, piles, urinary problems and heart diseases. Threats to the species have also been assessed and appropriate conservation measures suggested.

### Introduction

Dhamrai is one of the five Upazilas of Dhaka district with an area of 307.4 km<sup>2</sup> and is situated about 38 km north-west of Dhaka metropolis. It is located at 23°55' N and 90°14' E. Dhamrai represents an undulating area with conspicuous crests and troughs. The soil is a heterogenous assortment of dry, moist and clay material. The crest soils are represented by three different types, namely brownish grey fine sandy loam, dark grey fine sandy loam and grey fine sandy loam. The trough soils are represented by three different types, i.e. greyish-yellow fine sandy loam, yellowish-grey fine sandy loam and grey sandy loam. The structure of soil of Dhamrai is medium angular to subangular, blocky and granular. Consistency of dry soil is hard, moist soil is slightly firm to friable, while nature of wet soil is slightly sticky or plastic. Soil pH ranges from 6.1 - 6.4 (Hossain *et al.* 2003). Dhamrai Upazila enjoys the same climatic condition as other parts of the district do in the tropical monsoon zone. The temperature of the area ranges from 14.8 - 35.6°C. Monthly humidity varies from 48 - 79% throughout the year. The highest humidity is noted in August and the lowest in February (BBS 2009).

The plants of Dhamrai area exhibit a diverse habitats, such as wetland, cultivated land, *char*, homestead area, scrub jungles, fallow lands, etc. which support luxuriant formation of angiosperms and play a vital role in the local economy, environment and primary health care system. The importance of studying local floristic diversity has been realized and carried out in Bangladesh by Khan *et al.* (1994), Rahman and Hassan (1995), Uddin and Rahman (1999), Khan and Huq (2001), Uddin and Hassan (2010). Recently Tutul *et al.* (2009, 2010) and Rahman *et al.* (2010) conducted the inventorying of angiosperm diversity of *Runcia Sal* forest of Bangladesh. The present study aimed at making an inventory of the angiosperm species of Dhamrai Upazila and to document the medicinal uses of plant species by local people.

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## Materials and Methods

Plant specimens have been collected from all over Dhamrai through several field trips covering all seasons during 2009 - 2010. The collected specimens have been critically examined, studied and identified at Dhaka University Salar Khan Herbarium (DUSH). Identifications have been confirmed by consulting standard literature (Khan 1972 - 1987, Khan and Rahman 1989 - 2002, Dassanayake and Fosberg 1980 - 1985), and matching with identified herbarium specimens housed at DUSH and Bangladesh National Herbarium (DACB). Nomenclature has been updated following recent literature including Ahmed *et al.* (2007 - 2009) and Rashid and Rahman (2011). The families are arranged (Table 1) according to Cronquist (1981), and the species are listed alphabetically under each family along with their Bangla name, habit, phenology and voucher number. Emphasis has also been given to the economically important species particularly the medicinal plants used as primary health-care. The information on the uses of medicinal plants has been gathered through interview of the local people. The voucher specimens are preserved at DUSH.

## Results and Discussion

The present study has revealed a total of 263 angiosperm species in 210 genera under 79 families recorded from Dhamrai Upazila. Magnoliopsida is represented by 62 families, 154 genera and 200 species, while Liliopsida is represented by 17 families, 56 genera and 63 species. In Magnoliopsida, Asteraceae appears to be the largest family having 16 genera and 17 species, followed by Fabaceae with 13 species and Euphorbiaceae with 10 species. In Liliopsida, Poaceae appears to be the largest family with 19 genera and 20 species followed by Araceae with 9 species and Cyperaceae with 7 species.

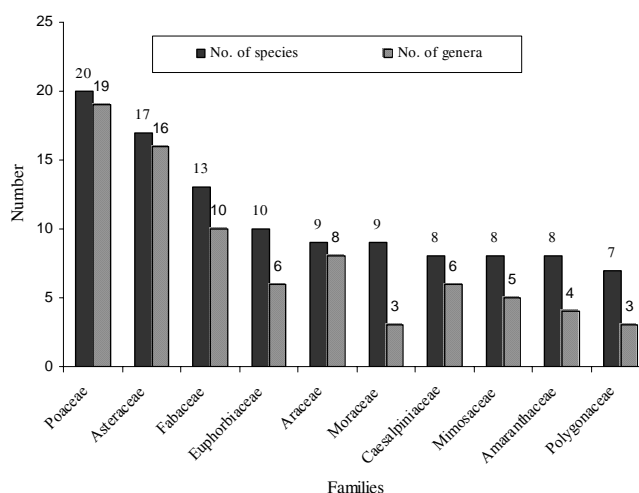


Fig. 1. Ten dominant plant families of Dhamrai Upazila.

Habit analysis shows that herbs are represented by 166 species including climbers, shrubs by 23 species and trees by 74 species. Out of 79 families recorded from the study area, 10 dominant families are Poaceae, Asteraceae, Fabaceae, Euphorbiaceae, Araceae, Moraceae, Caesalpinaceae, Mimosaceae, Amaranthaceae and Polygonaceae. The dominant families along with the number of species and genera are shown in Fig. 1.

Ten dominant families comprising 109 species represent 41.44% and the remaining 69 families with a total of 154 species contribute 58.56%.

**Table 1. Angiosperm species of Dhamrai Upazila.**

Taxa	Bangla name	Habit	Phenology	Voucher specimens
<b>MAGNOLIOPSIDA</b>				
<b>1. Annonaceae</b>				
1. <i>Annona reticulata</i> L.	<i>Nona</i>	Tree	Fl & Fr: 10-1	R 50
2. <i>A. squamosa</i> L.	<i>Ata</i>	Tree	Fl & Fr: 3-12	R 247
3. <i>Polyalthia longifolia</i> (Sonn.) Thw.	<i>Debdaru</i>	Tree	Fl & Fr: 3-10	R 453
<b>2. Lauraceae</b>				
4. <i>Litsea glutinosa</i> (Lour.) Roxb.	<i>Menda</i>	Tree	Fl & Fr: 4-12	R 109
<b>3. Piperaceae</b>				
5. <i>Peperomia pellucida</i> (L.) H. B. & K.	<i>Luchipata</i>	Herb	Fl & Fr: 1-12	R 380
6. <i>Piper longum</i> L.	<i>Pipul</i>	Herb	Fl & Fr: 6-9	R 54
<b>4. Nymphaeaceae</b>				
7. <i>Nymphaea nouchali</i> Burm. f.	<i>Shapla</i>	Herb	Fl & Fr: 1-12	R 427
8. <i>N. pubescens</i> Willd.	<i>Sadashapla</i>	Herb	Fl & Fr: 1-12	R 334
9. <i>N. rubra</i> Roxb. ex Andr.	<i>Lalshapla</i>	Herb	Fl & Fr: 8-1	R 460
<b>5. Ceratophyllaceae</b>				
10. <i>Ceratophyllum demersum</i> L.	<i>Jhanjhi</i>	Herb	Fl & Fr: 8-9	R 420
<b>6. Menispermaceae</b>				
11. <i>Stephania japonica</i> (Thunb.) Miers	<i>Nimukha</i>	Herb	Fl & Fr: 3-9	R 463
12. <i>Tinospora cordifolia</i> Miers	<i>Gulancho</i>	Herb	Fl & Fr: 1-10	R 373
<b>7. Ulmaceae</b>				
13. <i>Trema orientalis</i> (L.) Blume	<i>Jiban</i>	Tree	Fl & Fr: 9-10	R 325
<b>8. Moraceae</b>				
14. <i>Artocarpus lacucha</i> Buch.	<i>Deua</i>	Tree	Fl & Fr: 2-9	R 335
15. <i>A. heterophyllus</i> Lamk.	<i>Kanthal</i>	Tree	Fl & Fr: 2-6	R 391
16. <i>Ficus benghalensis</i> L.	<i>Bot</i>	Tree	Fl & Fr: 3-8	R 390
17. <i>F. elastica</i> Roxb.	<i>Atabot</i>	Tree	Fl & Fr: 3-4	R 406
18. <i>F. hispida</i> L. f.	<i>Kakdumur</i>	Tree	Fl & Fr: 4-9	R 43
19. <i>F. recemosa</i> L.	<i>Jagdumur</i>	Tree	Fl & Fr: 3-11	R 59
20. <i>F. religiosa</i> L.	<i>Assawatha</i>	Tree	Fl & Fr: 5-9	R 371
21. <i>F. rumphii</i> Bl.	<i>Hijulia</i>	Tree	Fl & Fr: 3-11	R 258
22. <i>Streblus asper</i> Lour.	<i>Sheora</i>	Tree	Fl & Fr: 4-11	R 34
<b>9. Urticaceae</b>				
23. <i>Laportea interrupta</i> (L.) Chew	<i>Bichuti</i>	Shrub	Fl & Fr: 5-9	R 49
24. <i>Pilea microphylla</i> (L.) Liebm	<i>Latamaricha</i>	Herb	Fl & Fr: 1-12	R 461
25. <i>Pouzolazia zeylanica</i> (L.) Benn.	<i>Kullaruki</i>	Herb	Fl & Fr: 6-12	R 158
<b>10. Casuarinaceae</b>				
26. <i>Casuarina equisetifolia</i> Forst.	<i>Jhau</i>	Tree	Fl & Fr: 11-2	R 218
<b>11. Nyctaginaceae</b>				
27. <i>Boerhavia repens</i> L.	<i>Punornava</i>	Herb	Fl & Fr: 1-12	R 24
<b>12. Chenopodiaceae</b>				
28. <i>Chenopodium album</i> L.	<i>Betua shak</i>	Herb	Fl & Fr: 12-3	R 187
29. <i>C. ambrosioides</i> L.	<i>Chandanbetu</i>	Herb	Fl & Fr: 11-3	R 195

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<b>13. Amaranthaceae</b>					
30.	<i>Achyranthes aspera</i> L.	Apang	Herb	Fl & Fr: 9-4	R 01
31.	<i>Alternanthera paronychioides</i> St. Hil	Jhulikhata	Herb	Fl & Fr: 1-5	R 93
32.	<i>A. philoxeroides</i> (Mart.) Griseb.	Malancha shak	Herb	Fl & Fr : 3-6	R 419
33.	<i>A. sessilis</i> (L.) R. Br.	Chanchi	Herb	Fl & Fr: 11-7	R 369
34.	<i>Amaranthus spinosus</i> L.	Kantanotey	Herb	Fl & Fr: 1-12	R 08
35.	<i>A. viridis</i> L.	Notey shak	Herb	Fl & Fr: 12-4	R 130
36.	<i>Centrostachys aquatica</i> (R. Br.) Wall.	Not known	Herb	Fl & Fr: 1-12	R 418
37.	<i>Gomphrena celosioides</i> L.	Botamphul	Herb	Fl & Fr: 6-10	R 102
<b>14. Portulacaceae</b>					
38.	<i>Portulaca oleracea</i> L.	Bara nunia	Herb	Fl & Fr: 1-12	R 398
<b>15. Polygonaceae</b>					
39.	<i>Persicaria barbata</i> (L.) Hara	Bekhunjabaj	Herb	Fl & Fr: 8-4	R 434
40.	<i>P. glabra</i> (Willd.) Gomez	Bihagni	Herb	Fl & Fr: 6-2	R 262
41.	<i>P. hydropiper</i> (L.) Spach.	Bishkatali	Herb	Fl & Fr : 8-4	R 39
42.	<i>P. orientalis</i> (L.) Spach.	Bara panimorich	Herb	Fl & Fr: 3-8	R 242
43.	<i>P. strigosa</i> (R. Br.) Nakai	Kanta-bishkatali	Herb	Fl & Fr: 5-1	R 270
44.	<i>Polygonum plebeium</i> R. Br.	Anjaban	Herb	Fl & Fr: 1-4	R 170
45.	<i>Rumex maritimus</i> L.	Banpalang	Herb	Fl & Fr: 1-5	R 184
<b>16. Dilleniaceae</b>					
46.	<i>Dillenia indica</i> L.	Chalta	Tree	Fl & Fr: 5-2	R 143
<b>17. Dipterocarpaceae</b>					
47.	<i>Hopea odorata</i> Roxb.	Telshur	Tree	Fl & Fr: 2-6	R 100
<b>18. Elaeocarpaceae</b>					
48.	<i>Elaeocarpus floribundus</i> Bl.	Belphoi	Tree	Fl & Fr: 5-6	R 454
<b>19. Tiliaceae</b>					
49.	<i>Corchorus aestuans</i> L.	Janglipat	Herb	Fl & Fr: 8-2	R 279
50.	<i>Triumfetta rhomboidea</i> Jacq.	Banokra	Shrub	Fl & Fr: 8-1	R 188
<b>20. Sterculiaceae</b>					
51.	<i>Melochia corchorifolia</i> L.	Tikiokra	Herb	Fl & Fr: 3-6	R 194
<b>21. Bombacaceae</b>					
52.	<i>Bombax ceiba</i> L.	Shimul	Tree	Fl & Fr: 2-5	R 172
<b>22. Malvaceae</b>					
53.	<i>Abutilon indicum</i> (L.) Sweet	Potari	Herb	Fl & Fr: 7-4	R 332
54.	<i>Sida acuta</i> Burm. f.	Urusia	Herb	Fl & Fr : 9-5	R 299
55.	<i>S. cordata</i> (Burm. f.) Borss.	Pitberala	Herb	Fl & Fr : 8-12	R 12
56.	<i>S. rhombifolia</i> L.	Lalberela	Herb	Fl & Fr: 7-12	R 11
57.	<i>Urena lobata</i> L.	Jangli ghagra	Herb	Fl & Fr: 10-4	R 28
<b>23. Lecythidaceae</b>					
58.	<i>Barringtonia acutangula</i> (L.) Gaertn.	Hizol	Tree	Fl & Fr: 5-9	R 110
<b>24. Cucurbitaceae</b>					
59.	<i>Coccinia grandis</i> (L.) Voigt	Telakucha	Herb	Fl & Fr: 3-11	R 13
<b>25. Capparaceae</b>					
60.	<i>Cleome rutidosperma</i> DC.	Begunehurhurey	Herb	Fl & Fr: 1-12	R 364
61.	<i>C. viscosa</i> L.	Hurhuria	Herb	Fl & Fr: 1-12	R 367
62.	<i>Crateva magna</i> (Lour.) DC.	Borun	Tree	Fl & Fr: 2-4	R 293

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<b>26. Brassicaceae</b>					
63.	<i>Rorippa indica</i> (L.) Hiern.	<i>Bansarisha</i>	Herb	Fl & Fr: 1-6	R 234
<b>27. Moringaceae</b>					
64.	<i>Moringa oleifera</i> Lamk.	<i>Sajna</i>	Tree	Fl & Fr: 10-3	R 117
<b>28. Ebenaceae</b>					
65.	<i>Diospyros malabarica</i> (Desr.) Kostel.	<i>Gab</i>	Tree	Fl & Fr: 5-8	R 101
<b>29. Mimosaceae</b>					
66.	<i>Acacia auriculiformis</i> A. Cunn.	<i>Akashmoni</i>	Tree	Fl & Fr: 6-2	R 09
67.	<i>A. mangium</i> Willd.	<i>Mangium</i>	Tree	Fl & Fr: 5-12	R 472
68.	<i>A. nilotica</i> (L.) Delile	<i>Babla</i>	Tree	Fl & Fr.: 8-5	R 386
69.	<i>Albizia lebbek</i> (L.) Benth.	<i>Kalokoroi</i>	Tree	Fl & Fr: 5-12	R 292
70.	<i>A. procera</i> (Roxb.) Benth.	<i>Koroi</i>	Tree	Fl & Fr: 5-12	R 290
71.	<i>Leucaena leucocephala</i> (Lamk.) de Wit.	<i>Ipil-ipil</i>	Tree	Fl & Fr: 3-11	R 374
72.	<i>Mimosa pudica</i> L.	<i>Lajjabati</i>	Herb	Fl & Fr: 1-12	R 291
73.	<i>Samanea saman</i> (Jacq.) Merr.	<i>Raintree</i>	Tree	Fl. & Fr: 4-10	R 339
<b>30. Caesalpinaceae</b>					
74.	<i>Bauhinia acuminata</i> L.	<i>Kanchan</i>	Shrub	Fl & Fr: 5-7	R 215
75.	<i>Cassia fistula</i> L.	<i>Sonalu</i>	Tree	Fl & Fr: 5-10	R 219
76.	<i>Delonix regia</i> Rafin.	<i>Krishmachura</i>	Tree	Fl & Fr: 4-9	R 225
77.	<i>Saraca asoca</i> (Roxb.) Willd.	<i>Ashok</i>	Tree	Fl & Fr: 2-6	R 22
78.	<i>Senna sophora</i> (L.) Roxb.	<i>Chotokolkeshunda</i>	Shrub	Fl & Fr: 11-2	R 03
79.	<i>S. occidentalis</i> Roxb.	<i>Bara kolkesunda</i>	Shrub	Fl & Fr: 5-10	R 15
80.	<i>S. tora</i> (L.) Roxb.	<i>Chakunda</i>	Herb	Fl & Fr: 1-12	R 14
81.	<i>Tamarindus indica</i> L.	<i>Tentul</i>	Tree	Fl & Fr: 4-12	R 214
<b>31. Fabaceae</b>					
82.	<i>Aeschynomene indica</i> L.	<i>Bhatshola</i>	Herb	Fl & Fr: 4-7	R 244
83.	<i>Alysicarpus heterophyllus</i> (Baker.) Jafr.	<i>Pannata</i>	Herb	Fl & Fr: 7-10	R 454
84.	<i>Butea monosperma</i> (Lamk.) Taub.	<i>Polash</i>	Tree	Fl & Fr: 1-4	R 88
85.	<i>Canavalia ensiformis</i> (L.) DC.	<i>Makanshim</i>	Herb	Fl & Fr: 11-3	R 78
86.	<i>Crotalaria pallida</i> Ait.	<i>Jhunjhuna</i>	Herb	Fl & Fr : 5-12	R 42
87.	<i>Dalbergia sissoo</i> Roxb.	<i>Sisso</i>	Tree	Fl & Fr: 3-8	R 41
88.	<i>Desmodium gangeticum</i> (L.) DC.	<i>Salpani</i>	Shrub	Fl & Fr: 6-9	R 259
89.	<i>D. heterophyllum</i> (Willd.) DC.	<i>Not known</i>	Herb	Fl & Fr: 6-3	R 20
90.	<i>D. triflorum</i> (L.) DC.	<i>Kodaliya</i>	Herb	Fl & Fr: 1-12	R 27
91.	<i>Erythrina veriegata</i> L.	<i>Mandar</i>	Tree	Fl & Fr: 2-5	R 456
92.	<i>Melilotus alba</i> Lamk.	<i>Sadabanmethi</i>	Herb	Fl & Fr: 3-10	R 256
93.	<i>Sesbania cannabina</i> (Retz.) Poir.	<i>Dhanchi</i>	Herb	Fl & Fr: 7-12	R 457
94.	<i>S. grandiflora</i> (L.) Poir.	<i>Bakphul</i>	Shrub	Fl & Fr: 12-3	R 256
<b>32. Lythraceae</b>					
95.	<i>Ammannia multiflora</i> Roxb.	<i>Not known</i>	Herb	Fl & Fr : 7-9	R 330
<b>33. Myrtaceae</b>					
96.	<i>Eucalyptus citriodora</i> Hook.	<i>Eucalyptus</i>	Tree	Fl & Fr: 1-12	R 308
97.	<i>Psidium guajava</i> L.	<i>Peyara</i>	Tree	Fl & Fr: 1-12	R 328
98.	<i>Syzygium cumini</i> (L.) Skeels	<i>Jam</i>	Tree	Fl & Fr: 3-6	R 376

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<b>34. Punicaceae</b>					
99.	<i>Punica granatum</i> L.	<i>Dalim</i>	Tree	Fl & Fr: 1-12	R 165
<b>35. Onagraceae</b>					
100.	<i>Ludwigia adscendens</i> (L.) Hara	<i>Kesardam</i>	Herb	Fl & Fr: 3-12	R 21
101.	<i>L. hyssopifolia</i> (G. Don) Exell	<i>Not known</i>	Herb	Fl & Fr: 1-12	R 407
102.	<i>L. prostrata</i> Roxb.	<i>Not known</i>	Herb	Fl & Fr: 1-9	R 152
<b>36. Combretaceae</b>					
103.	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	<i>Arjun</i>	Tree	Fl & Fr: 4-10	R 171
104.	<i>T. bellirica</i> (Gaertn.) Roxb.	<i>Bohera</i>	Tree	Fl & Fr: 3-11	R 134
105.	<i>T. chebula</i> Retz.	<i>Haritaki</i>	Tree	Fl & Fr: 4-10	R 186
<b>37. Euphorbiaceae</b>					
106.	<i>Acalypha indica</i> L.	<i>Muktajhuri</i>	Herb	Fl & Fr: 12-4	R 455
107.	<i>Croton bonplandianus</i> Baill.	<i>Croton</i>	Herb	Fl & Fr: 4-9	R 04
108.	<i>Euphorbia hirta</i> L.	<i>Dudhiya</i>	Herb	Fl & Fr: 2-3	R 06
109.	<i>E. thymifolia</i> L.	<i>Swetkerui</i>	Herb	Fl & Fr: 1-12	R 79
110.	<i>Phyllanthus acidus</i> (L.) Skeels	<i>Orbori</i>	Tree	Fl & Fr: 3-6	R 80
111.	<i>P. emblica</i> L.	<i>Amlaki</i>	Tree	Fl & Fr: 3-9	R 94
112.	<i>P. niruri</i> L.	<i>Bhuiamla</i>	Herb	Fl & Fr: 8-10	R 02
113.	<i>P. reticulatus</i> Poir.	<i>Chitki</i>	Shrub	Fl & Fr: 6-10	R 18
114.	<i>Ricinus communis</i> L.	<i>Rerhi</i>	Shrub	Fl & Fr: 9-2	R 149
115.	<i>Trewia nudiflora</i> L.	<i>Meragoda</i>	Tree	Fl & Fr: 5-10	R 348
<b>38. Rhamnaceae</b>					
116.	<i>Ziziphus mauritiana</i> Lamk.	<i>Boroi</i>	Tree	Fl & Fr : 6-2	R 378
<b>39. Vitaceae</b>					
117.	<i>Tetrastigma angustifolia</i> (Roxb.) Planch.	<i>Not known</i>	Herb	Fl & Fr: 3-6	R 62
<b>40. Sapindaceae</b>					
118.	<i>Cardiospermum halicacabum</i> L.	<i>Phutka</i>	Herb	Fl & Fr: 4-6	R 58
119.	<i>Litchi chinensis</i> Sonn.	<i>Lichu</i>	Tree	Fl & Fr: 4-6	R 115
<b>41. Anacardiaceae</b>					
120.	<i>Lannea coromandelica</i> (Houtt.) Merr.	<i>Jiga</i>	Tree	Fl & Fr: 12-5	R 429
121.	<i>Mangifera indica</i> L.	<i>Am</i>	Tree	Fl & Fr: 1-6	R 452
<b>42. Meliaceae</b>					
122.	<i>Aphanamixis polystachya</i> (Wall.) R.N. Parker	<i>Royna</i>	Tree	Fl & Fr: 2-5	R 202
123.	<i>Azadirachta indica</i> A. Juss.	<i>Nim</i>	Tree	Fl & Fr: 3-7	R 392
124.	<i>Melia azedarach</i> L.	<i>Goranim</i>	Tree	Fl & Fr: 3-2	R 17
125.	<i>Swietenia mahagoni</i> Jacq.	<i>Mehogoni</i>	Tree	Fl & Fr: 4-10	R 122
<b>43. Rutaceae</b>					
126.	<i>Aegle marmelos</i> (L.) Correa	<i>Bel</i>	Tree	Fl & Fr: 5-7	R 118
127.	<i>Citrus limon</i> (L.) Burm.	<i>Goralebu</i>	Tree	Fl & Fr: 3-11	R 167
128.	<i>Glycosmis pentaphylla</i> (Retz.) A. DC.	<i>Datmajan</i>	Tree	Fl & Fr: 2-4	R 263
129.	<i>Limonia acidissima</i> L.	<i>Koethbel</i>	Tree	Fl & Fr: 2-12	R 229
<b>44. Oxalidaceae</b>					
130.	<i>Averrhoa carambola</i> L.	<i>Kamranga</i>	Tree	Fl & Fr: 10-7	R 361
131.	<i>Oxalis corniculata</i> L.	<i>Amrul</i>	Herb	Fl & Fr: 9-5	R 95

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<b>45. Apiaceae</b>					
132.	<i>Centella asiatica</i> (L.) Urban	<i>Thankuni</i>	Herb	Fl & Fr: 4-10	R 135
133.	<i>Oenanthe benghalensis</i> Benth.	<i>Panturasi</i>	Herb	Fl & Fr: 4-8	R 458
<b>46. Apocynaceae</b>					
134.	<i>Alstonia scholaris</i> (L.) R. Br.	<i>Chatim</i>	Tree	Fl & Fr: 11-5	R 193
135.	<i>Nerium oleander</i> L.	<i>Raktakarobi</i>	Tree	Fl & Fr: 1-7	R 189
136.	<i>Plumeria obtusa</i> L.	<i>Gorurchampa</i>	Tree	Fl & Fr: 5-9	R 183
137.	<i>Tabernaemontana divaricata</i> (L.) R. Br.	<i>Dudhphul</i>	Shrub	Fl & Fr: 5-12	R 113
138.	<i>Thevetia peruviana</i> (Pers.) K. Schum.	<i>Holdekarobi</i>	Tree	Fl & Fr: 1-12	R 114
<b>47. Asclepiadaceae</b>					
139.	<i>Calotropis gigantea</i> (L.) R. Br.	<i>Bara akondo</i>	Shrub	Fl & Fr: 1-12	R 331
<b>48. Solanaceae</b>					
140.	<i>Datura metel</i> L.	<i>Dhutra</i>	Shrub	Fl & Fr: 4-9	R 129
141.	<i>Physalis angulata</i> L.	<i>Bantepari</i>	Herb	Fl & Fr: 2-8	R 156
142.	<i>Solanum indicum</i> L.	<i>Titbegun</i>	Herb	Fl & Fr: 1-12	R 274
143.	<i>S. nigrum</i> L.	<i>Kakmachi</i>	Herb	Fl & Fr: 1-12	R 150
144.	<i>S. torvum</i> Sw.	<i>Gothbegun</i>	Shrub	Fl & Fr: 1-12	R 169
<b>49. Convolvulaceae</b>					
145.	<i>Evolvulus nummularius</i> (L.) L.	<i>Bhuiokra</i>	Herb	Fl & Fr: 1-12	R 357
146.	<i>Ipomoea aquatica</i> Forssk.	<i>Kalmishak</i>	Herb	Fl & Fr: 10-2	R 83
147.	<i>I. fistulosa</i> Mart. ex Choisy	<i>Dholkalmi</i>	Shrub	Fl & Fr: 1-12	R 415
<b>50. Cuscutaceae</b>					
148.	<i>Cuscuta reflexa</i> Roxb.	<i>Sharnalata</i>	Herb	Fl & Fr: 1-4	R 166
<b>51. Menyanthaceae</b>					
149.	<i>Nymphoides hydrophylla</i> (Lour.) O. Kuntze	<i>Chandmala</i>	Herb	Fl & Fr: 10-2	R 425
150.	<i>N. indicum</i> (L.) O. Kuntze	<i>Panchuli</i>	Herb	Fl & Fr: 10-2	R 424
<b>52. Hydrophyllaceae</b>					
151.	<i>Hydrolea zeylanica</i> (L.) Vahl	<i>Islanguli</i>	Herb	Fl & Fr: 10-3	R 458
<b>53. Boraginaceae</b>					
152.	<i>Heliotropium indicum</i> L.	<i>Hatishur</i>	Herb	Fl & Fr: 1-12	R 266
153.	<i>H. ovalifolium</i> Forssk.	<i>Nagaphuli</i>	Herb	Fl & Fr: 2-8	R 267
<b>54. Verbenaceae</b>					
154.	<i>Clerodendrum viscosum</i> Vent	<i>Bhat</i>	Herb	Fl & Fr: 12-6	R 174
155.	<i>Gmelina arborea</i> Roxb.	<i>Gamari</i>	Tree	Fl & Fr: 2-9	R 416
156.	<i>Lantana camara</i> L.	<i>Lantana</i>	Shrub	Fl & Fr: 1-12	R 382
157.	<i>Lippia alba</i> (Mill.) Britton	<i>Pichas-lakri</i>	Shrub	Fl & Fr: 1-12	R 245
158.	<i>Phyla nodiflora</i> (L.) Greene	<i>Bhuiokra</i>	Herb	Fl & Fr: 1-12	R 141
159.	<i>Tectona grandis</i> L.	<i>Shegun</i>	Tree	Fl & Fr: 7-11	R 103
160.	<i>Vitex negundo</i> L.	<i>Nishinda</i>	Tree	Fl & Fr: 4-2	R 62
<b>55. Lamiaceae</b>					
161.	<i>Hyptis suaveolens</i> (L.) Poit.	<i>Thukma</i>	Herb	Fl. & Fr: 11-4	R 462
162.	<i>Leonurus sibiricus</i> L.	<i>Roktodhron</i>	Herb	Fl & Fr: 1-12	R 30
163.	<i>Leucus aspera</i> (Willd.) Link	<i>Dhondokalas</i>	Herb	Fl & Fr: 1-12	R 29
164.	<i>Ocimum americanum</i> L.	<i>Bantulshi</i>	Herb	Fl & Fr: 6-2	R 107
165.	<i>O. tenuiflorum</i> L.	<i>Tulshi</i>	Herb	Fl & Fr: 11-2	R 128

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<b>56. Scrophulariaceae</b>					
166.	<i>Limnophila heterophylla</i> Roxb.	<i>Not known</i>	Herb	Fl & Fr: 2-9	R 437
167.	<i>Lindernia anagallis</i> (Burm. f.) Pennel.	<i>Not known</i>	Herb	Fl & Fr: 3-11	R 315
168.	<i>L. crustacea</i> (L.) F. Muell.	<i>Not known</i>	Herb	Fl & Fr: 4-12	R 220
169.	<i>L. rotundifolia</i> (L.) Alston	<i>Not known</i>	Herb	Fl & Fr: 1-12	R 393
170.	<i>Mecardonia procumbens</i> (Mill.) Small	<i>Not known</i>	Herb	Fl & Fr: 2-6	R 319
171.	<i>Scoparia dulcis</i> L.	<i>Bondhoney</i>	Herb	Fl & Fr: 12-1	R 81
<b>57. Acanthaceae</b>					
172.	<i>Dipteracanthus prostratus</i> (Poir.) Nees	<i>Not known</i>	Herb	Fl & Fr: 5-8	R 366
173.	<i>Hygrophila schulli</i> (Buch.-Ham.) M.R. & S.N. Almeida	<i>Talmakhna</i>	Herb	Fl & Fr: 10-1	R 417
174.	<i>Justicia adhatoda</i> L.	<i>Basak</i>	Shrub	Fl & Fr: 1-4	R 132
175.	<i>J. gendarussa</i> L.	<i>Jagadmadan</i>	Shrub	Fl & Fr: 12-5	R 145
176.	<i>Ruellia tuberosa</i> L.	<i>Chatpotey</i>	Herb	Fl & Fr: 1-2	R 253
177.	<i>Rungia pectinata</i> (L.) Nees	<i>Pindi</i>	Herb	Fl & Fr: 11-5	R 142
<b>58. Bignoniaceae</b>					
178.	<i>Tecoma stans</i> (L.) Juss. ex Kunth	<i>Holde Tecoma</i>	Shrub	Fl & Fr: 5-12	R 85
<b>59. Lentibulariaceae</b>					
179.	<i>Utricularia aurea</i> Lour.	<i>Jhangi</i>	Herb	Fl & Fr: 7-4	R 423
<b>60. Campanulaceae</b>					
180.	<i>Wahlenbergia erecta</i> (Roth ex Roem. & Schult.) Tuya	<i>Not known</i>	Herb	Fl & Fr: 10-2	R 223
<b>61. Rubiaceae</b>					
181.	<i>Dentella repens</i> Forst.	<i>Bhuiapat</i>	Herb	Fl. & Fr: 8-9	R 33
182.	<i>Hedyotis corymbosa</i> (L.) Lamk.	<i>Khetpapra</i>	Herb	Fl & Fr: 1-12	R 127
183.	<i>Neolamarckia cadamba</i> (Roxb.) Bosser.	<i>Kadam</i>	Tree	Fl & Fr: 5-8	R 397
<b>62. Asteraceae</b>					
184.	<i>Ageratum conyzoides</i> L.	<i>Fulkuri</i>	Herb	Fl & Fr: 9-6	R 154
185.	<i>Blumea lacera</i> (Burm. f.) DC.	<i>Kukurshunga</i>	Herb	Fl & Fr: 11-7	R 48
186.	<i>B. membranacea</i> Wall. ex DC.	<i>Not known</i>	Herb	Fl & Fr: 1-3	R 69
187.	<i>Chromolaena odorata</i> (L.) King & Robin.	<i>German lata</i>	Shrub	Fl & Fr: 12-4	R 180
188.	<i>Cirsium arvense</i> (L.) Scop.	<i>Shial-kata</i>	Herb	Fl & Fr: 2-6	R 31
189.	<i>Cotula hemispherica</i> (Roxb.) Wall. ex Clarke	<i>Babuni</i>	Herb	Fl & Fr: 12-3	R 207
190.	<i>Eclipta alba</i> (L.) Hassk.	<i>Kalokeshi</i>	Herb	Fl & Fr: 1-12	R 148
191.	<i>Enhydra fluctuans</i> Lour.	<i>Helencha</i>	Herb	Fl & Fr: 1-4	R 421
192.	<i>Gnaphalium luteo-album</i> L.	<i>Bara kamra</i>	Herb	Fl & Fr: 3-8	R 180
193.	<i>Grangea maderaspatana</i> (L.) Poir.	<i>Nemuti</i>	Herb	Fl & Fr: 12-5	R 233
194.	<i>Mikania cordata</i> (Burm. f.) Robinson	<i>Assam lata</i>	Herb	Fl & Fr: 10-2	R 51
195.	<i>Spilanthes calva</i> DC.	<i>Marhatitiga</i>	Herb	Fl & Fr: 1-12	R 53
196.	<i>Synedrella nodiflora</i> (L.) Gaertn.	<i>Not known</i>	Herb	Fl & Fr: 1-12	R 19
197.	<i>Tridax procumbens</i> L.	<i>Tridhara</i>	Herb	Fl & Fr: 1-12	R 301
198.	<i>Vernonia cinerea</i> (L.) Nees	<i>Kukshim</i>	Herb	Fl & Fr: 5-9	R 124
199.	<i>Xanthium indicum</i> Koen.	<i>Ghagra</i>	Herb	Fl & Fr: 1-12	R 35
200.	<i>Youngia japonica</i> (L.) DC.	<i>Not known</i>	Herb	Fl & Fr: 8-1	R 155

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<b>LILIOPSIDA</b>					
<b>63. Limnocharitaceae</b>					
201.	<i>Limnocharis flava</i> (L.) Buchen.	<i>Not known</i>	Herb	Fl & Fr: 6-9	R 414
<b>64. Alismataceae</b>					
202.	<i>Sagittaria guayanensis</i> H. B. & K. subsp. <i>lappula</i> (D. Don) Bogin	<i>Kaowathukri</i>	Herb	Fl & Fr: 6-9	R 468
203.	<i>S. sagittifolia</i> L.	<i>Chhotokut</i>	Herb	Fl & Fr: 10-12	R 349
<b>65. Hydrocharitaceae</b>					
204.	<i>Hydrilla verticillata</i> (L. f.) Royle	<i>Kureli</i>	Herb	Fl & Fr: 1-12	R 443
205.	<i>Ottelia alismoides</i> (L.) Pers.	<i>Panikola</i>	Herb	Fl & Fr: 1-12	R 446
206.	<i>Vallisneria spiralis</i> L.	<i>Patajhangi</i>	Herb	Fl & Fr: 10-3	R 451
<b>66. Aponogetonaceae</b>					
207.	<i>Aponogeton natans</i> (L.) Engl. & Krause	<i>Ghentu</i>	Herb	Fl & Fr: 4-10	R 37
<b>67. Arecaceae</b>					
208.	<i>Areca catechu</i> L.	<i>Supari</i>	Tree	Fl & Fr : 1-12	R 64
209.	<i>Borassus flabellifer</i> L.	<i>Tal</i>	Tree	Fl & Fr: 1-10	R 67
210.	<i>Calamus viminalis</i> Willd.	<i>Bara bet</i>	Shrub	Fl & Fr: 1-12	R 217
211.	<i>Cocos nucifera</i> L.	<i>Narikel</i>	Tree	Fl & Fr: 3-7	R 68
212.	<i>Phoenix sylvestris</i> Roxb.	<i>Khejur</i>	Tree	Fl & Fr: 12-6	R 314
<b>68. Pandanaceae</b>					
213.	<i>Pandanus odoratus</i> Ridl.	<i>Polao pata</i>	Shrub	Fl & Fr: 5-10	R 470
<b>69. Araceae</b>					
214.	<i>Alocasia cucullata</i> (Lour.) G. Don	<i>Bishkachu</i>	Herb	Fl & Fr: 5-7	R 356
215.	<i>A. macrorrhizos</i> (L.) G. Don	<i>Mankachu</i>	Herb	Fl & Fr: 7-10	R 60
216.	<i>Amorphophallus campanulatus</i> Decne	<i>Olkachu</i>	Herb	Fl & Fr: 5-11	R 40
217.	<i>Colocasia esculenta</i> (L.) Schott	<i>Kochu</i>	Herb	Fl & Fr : 5-10	R 250
218.	<i>Lasia spinosa</i> (L.) Thw.	<i>Kantakachu</i>	Herb	Fl & Fr: 1-11	R 354
219.	<i>Pistia stratiotes</i> L.	<i>Topapana</i>	Herb	Fl & Fr: 10-3	R 440
220.	<i>Rhaphidophora aurea</i> (Lindl. & Andr.) Birds.	<i>Not known</i>	Herb	Fl & Fr: 4-5	R 286
221.	<i>Syngonium podophyllum</i> Schott	<i>Not known</i>	Herb	Fl & Fr: 2-11	R 369
222.	<i>Typhonium trilobatum</i> (L.) Schott	<i>Ghetkachu</i>	Herb	Fl & Fr: 4-10	R 280
<b>70. Lemnaceae</b>					
223.	<i>Lemna perpusilla</i> Torrey	<i>Khudipana</i>	Herb	Fl & Fr: 5-9	R 469
<b>71. Commelinaceae</b>					
224.	<i>Commelina benghalensis</i> L.	<i>Kanchira</i>	Herb	Fl & Fr: 2-12	R 409
225.	<i>C. longifolia</i> Lamk.	<i>Panikanchira</i>	Herb	Fl & Fr: 12-1	R 98
226.	<i>Cyanotis cristata</i> (L.) D. Don	<i>Not known</i>	Herb	Fl & Fr: 9-2	R 297
227.	<i>Murdania nodiflora</i> (L.) Brenan	<i>Kureli</i>	Herb	Fl & Fr: 7-9	R 399
<b>72. Cyperaceae</b>					
228.	<i>Cyperus exaltatus</i> Retz.	<i>Not known</i>	Herb	Fl & Fr: 10-3	R 182
229.	<i>C. iria</i> L.	<i>Bara chancha</i>	Herb	Fl & Fr: 5-10	R 252
230.	<i>C. rotundus</i> L.	<i>Mutha</i>	Herb	Fl & Fr: 5-9	R 237
231.	<i>Eleocharis ochrastachys</i> Steud.	<i>Not known</i>	Herb	Fl & Fr: 9-1	R 17
232.	<i>Kyllinga nemoralis</i> (J.R. Forst & G. Forst.) Dandy	<i>Nirbishi</i>	Herb	Fl & Fr: 6-9	R 273

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233.	<i>Pycreus pumilus</i> (L.) Nees ex Clarke	<i>Not known</i>	Herb	Fl. & Fr: 4-9	R 182
234.	<i>Schoenoplectus articulatus</i> (L.) Palla	<i>Potpote</i>	Herb	Fl & Fr: 10-3	R 75
<b>73. Poaceae</b>					
235.	<i>Bambusa balcooa</i> Roxb.	<i>Barakbans</i>	Tree	Fl & Fr: 3-9	R 346
236.	<i>B. bambos</i> (L.) Voss	<i>Bans</i>	Tree	Fl & Fr: 4-3	R 233
237.	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	<i>Premkanta</i>	Herb	Fl & Fr: 1-12	R 272
238.	<i>Coix lacryma-jobi</i> L.	<i>Tasbi</i>	Shrub	Fl & Fr: 8-3	R 471
239.	<i>Cynodon dactylon</i> (L.) Pers.	<i>Durba</i>	Herb	Fl & Fr: 7-12	R 77
240.	<i>Dactyloctenium aegyptium</i> (L.) P. Beauv.	<i>Makra</i>	Herb	Fl & Fr: 1-12	R 227
241.	<i>Digitaria sanguinalis</i> (L.) Scop.	<i>Makunjali</i>	Herb	Fl & Fr: 8-10	R 381
242.	<i>Echinochloa crusgalli</i> (L.) P. Beauv.	<i>Barashymaghas</i>	Herb	Fl & Fr: 4-10	R 249
243.	<i>Eleusine indica</i> (L.) Gaertn.	<i>Malankuri</i>	Herb	Fl & Fr: 6-8	R 111
244.	<i>Eragrostis tenella</i> (L.) P. Beauv.	<i>Koni</i>	Herb	Fl & Fr: 3-9	R 182
245.	<i>Hygroryza aristata</i> (Retz.) Nees	<i>Phutki</i>	Herb	Fl & Fr: 10-2	R 442
246.	<i>Imperata cylindrica</i> (L.) P. Beauv.	<i>Kash</i>	Herb	Fl & Fr: 10-1	R 112
247.	<i>Oplismenus burmanii</i> (Rtez.) P. Beauv.	<i>Not known</i>	Herb	Fl & Fr: 9-1	R 379
248.	<i>Ottochloa nodosa</i> (Kunth.) Dandy	<i>Not known</i>	Herb	Fl & Fr: 7-12	R 177
249.	<i>Paspalidium punctatum</i> (Burm.) A. Camus	<i>Petinar</i>	Herb	Fl & Fr: 8-3	R 126
250.	<i>Paspalum longifolium</i> Roxb.	<i>Not known</i>	Herb	Fl & Fr: 5-8	R 248
251.	<i>Saccharum spontaneam</i> L.	<i>Kash</i>	Herb	Fl & Fr: 1-12	R 282
252.	<i>Setaria glauca</i> (L.) P. Beauv.	<i>Kauni</i>	Herb	Fl & Fr: 9-12	R 190
253.	<i>Sporolobus diander</i> (Retz.) P. Beauv.	<i>Benajoni</i>	Herb	Fl & Fr: 3-10	R 250
254.	<i>Vetiveria zizanioides</i> (L.) Nash	<i>Khuskhus</i>	Herb	Fl & Fr: 9-12	R 206
<b>74. Zingiberaceae</b>					
255.	<i>Curcuma zedoaria</i> (Christm.) Rosc.	<i>Shoti</i>	Herb	Fl & Fr: 2-7	R 235
<b>75. Costaceae</b>					
256.	<i>Costus speciosus</i> Sm.	<i>Kushtha</i>	Herb	Fl & Fr: 4-10	R 398
<b>76. Pontederiaceae</b>					
257.	<i>Eichhornia crassipes</i> (Mart.) Solms	<i>Kochuripana</i>	Herb	Fl & Fr: 1-12	R 448
258.	<i>Monochoria hastata</i> (L.) Solms	<i>Baranukha</i>	Herb	Fl & Fr: 1-12	R 447
259.	<i>M. vaginalis</i> (Burm. f.) Presl.	<i>Nukha</i>	Herb	Fl & Fr: 5-1	R 449
<b>77. Liliaceae</b>					
260.	<i>Curculigo orchidioides</i> Gaertn.	<i>Tali</i>	Herb	Fl & Fr: 2-8	R 413
261.	<i>Pancratium verecandum</i> Ait.	<i>Kumur</i>	Herb	Fl & Fr: 3-7	R 99
<b>78. Dioscoreaceae</b>					
262.	<i>Dioscorea alata</i> L.	<i>Guraniya alu</i>	Herb	Fl & Fr: 10-12	R 75
<b>79. Orchidaceae</b>					
263.	<i>Vanda tessellata</i> (Roxb.) Hook.	<i>Rasna</i>	Herb	Fl & Fr: 4-9	R 240

*Aquatic vegetation:* Dhamrai Upazila is endowed with different aquatic habitats including ponds, tanks, *beels* and other low-lying areas filled with seasonal water. This habitat is rich with diverse aquatic vegetation. Some of the important aquatic angiosperms are *Alternanthera philoxeroides*, *Centrostachys aquatica*, *Ceratophyllum demersum*, *Eichhornia crassipes*, *Enhydra fluctuans*, *Hydrilla verticillata*, *Hygrophila auriculata*, *Hygroryza aristata*, *Ipomoea aquatica*, *Lemna purpusilla*, *Limnophila heterophylla*, *Ludwigia adscendens*, *Monochoria hastata*, *M. vaginalis*, *Nymphaea nouchali*, *N. pubescens*, *Nymphoides indicum*, *Ottelia alismoides*, *Pistia stratiotes*, *Sagittaria guayanensis* subsp. *lappula*, *S. sagittifolia*, *Schoenoplectus articulatus*, *Utricularia aurea* and *Vallisneria spiralis*.

*Medicinally important plants:* The present study identifies 62 medicinal plants locally used by the people of Dhamrai area for the treatment of at least 30 common diseases and some of the important diseases are diabetes, jaundice, diarrhoea, dysentery, cold and cough, asthma, fever, spleen and liver complaints, piles, ulcers and several skin diseases. The medicinal plants are listed in Table 2 along with their family names, part(s) used and the diseases treated for. Photographs of some wild medicinally important species are presented in Plate 1.

**Table 2. Medicinal plants used by the local people of Dhamrai area.**

Sl. No.	Plant species	Family name	Part(s) used	Diseases to be treated
1.	<i>Achyranthes aspera</i> L.	Amaranthaceae	R	Jaundice
2.	<i>Aegle marmelos</i> (L.) Correa	Rutaceae	Fr, R	Diarrhoea and dysentery
3.	<i>Ageratum conyzoides</i> L.	Asteraceae	St, L, R	Fever, chronic ulcers and pneumonia
4.	<i>Albizia procera</i> (Roxb.) Benth.	Mimosaceae	B, L	Insecticide and fish poisoning
5.	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	B	Fever and asthma
6.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	L, St, R	Blood purifier, rheumatism and irregular menstruation
7.	<i>Amaranthus viridis</i> L.	Amaranthaceae	WP	Snake-bite
8.	<i>Annona squamosa</i> L.	Annonaceae	B	Diarrhoea
9.	<i>Aphanamixis polystachya</i> (Wall.) R. N. Parker	Meliaceae	B	Spleen and liver diseases
10.	<i>Averrhoa carambola</i> L.	Oxalidaceae	Fr	Piles
11.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	L, B	Fever, sores, spleen complaints and small pox
12.	<i>Blumea lacera</i> (Burm. f.) DC.	Asteraceae	R	Mouth diseases
13.	<i>Boerhavia repens</i> L.	Nyctaginaceae	R, L	Diuretic, laxative and jaundice
14.	<i>Butea monosperma</i> (Lamk.) Taub.	Fabaceae	Fl	Diarrhoea
15.	<i>Centella asiatica</i> (L.) Urban	Apiaceae	WP	Dysentery and ulcer
16.	<i>Clerodendrum viscosum</i> Vent	Verbenaceae	L, R	Tumors, skin diseases and snake-bite
17.	<i>Coccinia grandis</i> (L.) Voigt	Cucurbitaceae	L	Diabetes and skin diseases
18.	<i>Colocasia esculenta</i> (L.) Schott	Araceae	C, L	Scorpion bites, astringent and stimulant
19.	<i>Commelina benghalensis</i> L.	Commelinaceae	WP	Itches, sores and urinary burning
20.	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	S	Jaundice
21.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	WP	Stop bleeding and tooth-ache
22.	<i>Cyperus rotundus</i> L.	Cyperaceae	R	Ulcer, sores and urinary problems
23.	<i>Dillenia indica</i> L.	Dilleniaceae	Fr	Diarrhoea and dysentery
24.	<i>Eclipta alba</i> (L.) Hassk.	Asteraceae	WP	Skin diseases and jaundice
25.	<i>Eleusine indica</i> (L.) Gaertn.	Poaceae	WP	Liver complaints
26.	<i>Enhydra fluctuans</i> Lour.	Asteraceae	L	Bronchitis, biliousness and leucoderma
27.	<i>Ficus hispida</i> L. f.	Moraceae	Fr	Diabetes
28.	<i>F. religiosa</i> L.	Moraceae	B	Skin diseases and tooth-ache
29.	<i>Glycosmis pentaphylla</i> (Retz.) DC.	Rutaceae	L, St	Jaundice and tooth-ache
30.	<i>Heliotropium indicum</i> L.	Boraginaceae	L	Fever
31.	<i>Hyptis suaveolens</i> (L.) Poit.	Lamiaceae	L, S	Stomach-ache and uterus complaints
32.	<i>Justicia adhatoda</i> L.	Acanthaceae	L	Dysentery, cold and cough

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33.	<i>Kyllinga nemoralis</i> (J. R. Forst & G. Forst.) Dandy	Cyperaceae	R	Fever
34.	<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	L	Chronic skin eruption and rheumatism
35.	<i>Litsea glutinosa</i> (Lour.) Roxb.	Lauraceae	B	Diarrhoea and dysentery
36.	<i>Melia azedarach</i> L.	Meliaceae	L	Fever, small pox and antiseptic
37.	<i>Mikania cordata</i> (Burm. f.) Robin.	Asteraceae	L	Itches, wounds and dyspepsia
38.	<i>Mimosa pudica</i> L.	Mimosaceae	R	Blood diseases, jaundice and ulcer
39.	<i>Moringa oleifera</i> Lamk.	Moringaceae	L, Fr, B	Abscesses, vomiting, dysentery, cold and cough
40.	<i>Nymphaea nouchali</i> Burm. f.	Nymphaeaceae	Fl, Rh	Blood dysentery, piles, dyspepsia and diabetes
41.	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	L	Cold, cough, ring worm and gastric disorders
42.	<i>Oxalis corniculata</i> L.	Oxalidaceae	L	Antiscorbutic and antidote
43.	<i>Peperomia pellucida</i> (L.) H. B. & K.	Piperaceae	L	Asthma
44.	<i>Phoenix sylvestris</i> Roxb.	Arecaceae	Fr	Fever, heart disease and abdominal complaints
45.	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Fr	Diuretic and laxative
46.	<i>Piper longum</i> L.	Piperaceae	Fr	Bronchitis, jaundice and fever
47.	<i>Portulaca oleracea</i> L.	Portulacaceae	L	Ulcer, diarrhoea, dysentery
48.	<i>Rumex maritimus</i> L.	Polygonaceae	L, S	Aphrodisiac and burning complaints
49.	<i>Saraca asoca</i> (Roxb.) Willd.	Caesalpiniaceae	Fl, B	Dysentery and female diseases
50.	<i>Scoparia dulcis</i> L.	Scrophulariaceae	WP	Diabetes and kidney problems
51.	<i>Senna occidentalis</i> Roxb.	Caesalpiniaceae	L	Sores and itches
52.	<i>S. sophora</i> (L.) Roxb.	Caesalpiniaceae	L	Hopping cough, asthma and ring worm
53.	<i>Sida cordata</i> (Burm. f.) Borss.	Malvaceae	Fl, Fr	Burning complaints
54.	<i>Solanum indicum</i> L.	Solanaceae	R	Toothache and cough
55.	<i>S. torvum</i> Sw.	Solanaceae	Fr, R	Spleen enlargement and foot crack
56.	<i>Spilanthes calva</i> DC.	Asteraceae	R	Toothache
57.	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	B, L, S	Diabetes, chronic diarrhoea and sore throats
58.	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Combretaceae	B	Heart disease
59.	<i>T. bellirica</i> (Gaertn.) Roxb.	Combretaceae	Fr	Bronchitis, diarrhoea and menstruation problems
60.	<i>T. chebula</i> Retz.	Combretaceae	Fr	Constipation, dysentery, menstruation
61.	<i>Tinospora cordifolia</i> Miers	Menispermaceae	L, S	Blood purifier, jaundice and cardiac problems
62.	<i>Vetiveria zizanioides</i> (L.) Nash	Poaceae	R	Vomiting and stomach-ache

R = Root, Rh = Rhizome, St = Stem, B = Bark, C = Corm, L = Leaves, Fl = Flower, Fr = Fruit, S = Seed, WP = Whole plant.

In addition to the medicinal plants used for treatment of several diseases, the inhabitants of Dhamrai employ several wild plants as leafy vegetables, e.g. *Colocasia esculenta*, *Nymphaea nouchali*, *Oxalis corniculata*, *Solanum torvum*, etc. The local people also use some plants in their religious festivals, i.e. *Aegle marmelos*, *Ficus benghalensis*, *F. religiosa*, *Mangifera indica*, *Ocimum tenuiflorum*, *Cocos nucifera*, etc.

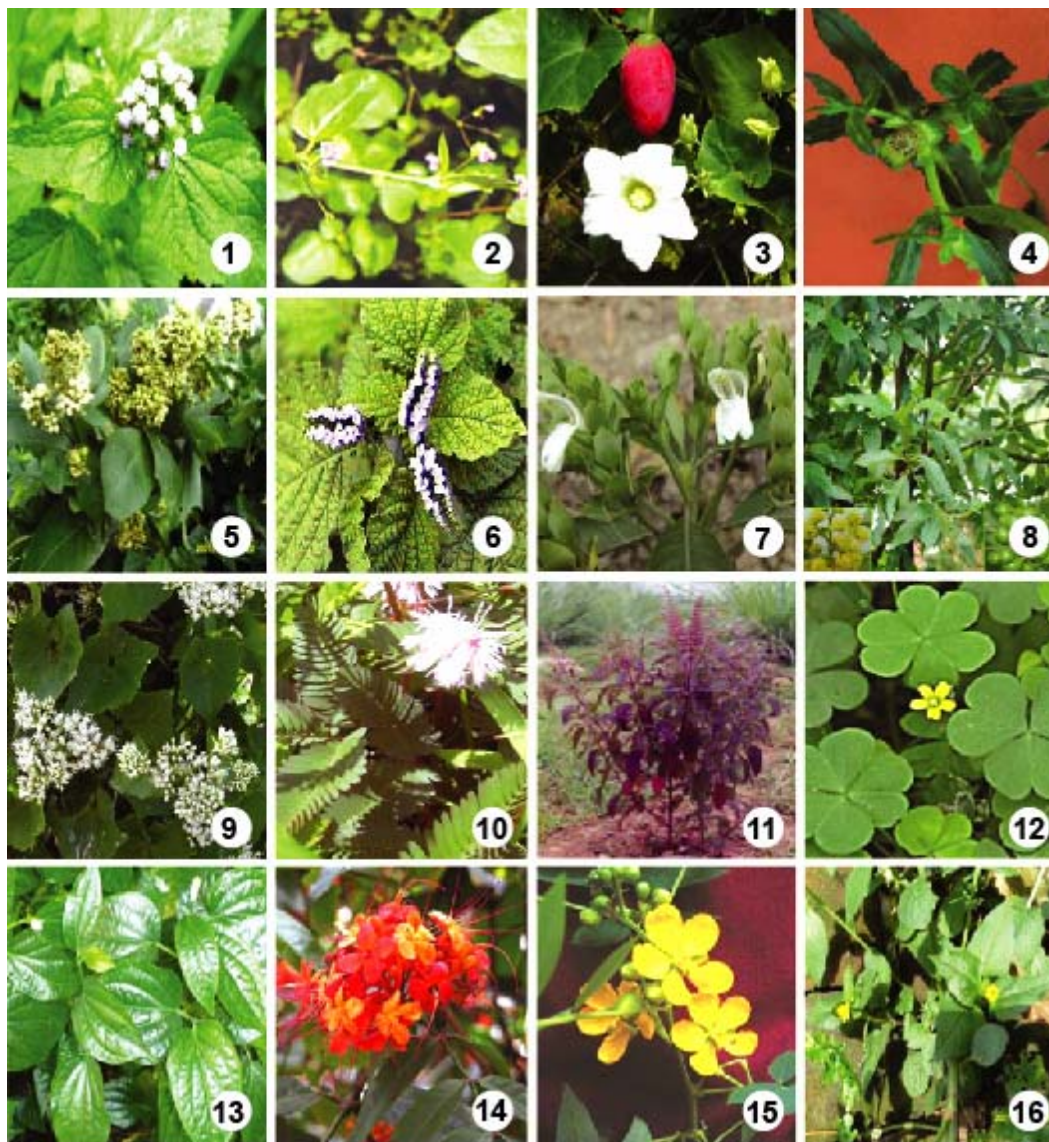


Plate 1

Figs 1-16: Some medicinal plants of Dhamrai area. 1. *Ageratum conyzoides*, 2. *Boerhavia repens*, 3. *Coccinia grandis*, 4. *Enhydra fluctuans*, 5. *Glycosmis pentaphylla*, 6. *Heliotropium indicum*, 7. *Justicia adhatoda*, 8. *Litsea glutinosa*, 9. *Mikania cordata*, 10. *Mimosa pudica*, 11. *Ocimum tenuiflorum*, 12. *Oxalis corniculata*, 13. *Piper longum*, 14. *Saraca asoca*, 15. *Senna occidentalis*, 16. *Spilanthes calva*.

Out of 263 angiosperms recorded from Dhamrai area, 221 species are wild and 42 tree species are planted. Cultivated herbs and shrubs were not taken into consideration in this account. Among the 62 medicinal plants used by the local people for their primary health care 50 species have been found wild. Luxuriant growth of aquatic plants is found in Dhamrai. The macrophytes which are very common in the study area include *Eichhornia crassipes*, *Pistia stratiotes*, *Aponogeton natans*,

*Vallisneria spiralis*, etc. Shallow water bodies support *Nymphaea nouchali*, *Ipomoea aquatica* and *Enhydra fluctuans*. Commonly found climbers are *Asparagus racemosus* and *Tinospora cordifolia*. *Vanda tessellata* and *Cuscuta reflexa* were observed on the homestead trees as epiphyte and parasite, respectively. Very commonly growing roadside plants include *Heliotropium indicum*, *Mimosa pudica*, *Spilanthes calva*, *Croton bonplandianus*, *Sporobolus diander*, *Leucus aspera* and *Senna tora*. Several plants are found rare and endangered in Dhamrai. Some of the rare plants of Dhamrai are *Alternanthera paronychioides*, *Amorphophallus campanulatus*, *Dipteracanthus prostratus*, *Ficus rumphii*, *Heliotropium ovalifolium*, *Hygrophila schulli*, *Persicaria barbata*, *Solanum torvum*, *Syngonium podophyllum* and *Vitex negundo*.

**Threats to the species and suggested measures:** Plant diversity of Dhamrai is under great risk because of many threats which have been identified based on the field observations and group discussion with local people during the field visits. Some of the important threats include modern agriculture, urbanization, lack of knowledge of collection techniques particularly for medicinal plants, over-exploitation, lack of awareness, exotic plantation, etc. If the current situation goes on, the area will lost a number of important plants including the medicinal ones. Therefore, immediate steps should be undertaken to conserve the plant species along with habitat protection. In order to conserve plant diversity and to ensure habitat protection the following recommendations are suggested: (i) extensive inventory of the flora of the area should be done immediately along with distribution map of the species, (ii) conservation of medicinal and threatened plants through *ex-situ* method should be undertaken, and the local people should be involved in this activity, (iii) awareness among the local people should be created for the conservation of botanical diversity, (iv) traditional usage of medicinal plants should be recorded and documented, (v) nursery should be developed for the propagation of threatened plants and (vi) commercial cultivation of medicinal plants should be undertaken to meet the local demand.

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