

Assessment of Angiosperm Weeds of Rajshahi, Bangladesh with Emphasis on Medicinal Plants

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Abstract Assessment of angiosperm weeds of Rajshahi, Bangladesh has been studied. A total of 155 angiosperm weed species under 125 genera and 50 families were recorded. Of these, Magnoliopsida (Dicots) was represented by 138 species under 109 genera and 43 families while Liliopsida (Monocots) was represented by 17 species under 16 genera and 7 families. Asteraceae were the largest family in Magnoliopsida represented by 27 species, and Araceae were the largest family in Liliopsida represented by 6 species. Fifty (50) medicinal plants have been documented with their uses for the cure of more than 61 diseases, and some of these are abscess, asthma, abortion, cough, cold, small pox, constipation, dysentery, diarrhea, diabetes, eczema, fever, and fracture of bone, headache, heart disease, itches, jaundice, menstrual disease, paralysis, piles, skin diseases, snake-bite, toothache, vomiting, worm, wound and others. This detailed information will be helpful for the pharmacognosist, botanist, ethno-botanist and pharmacologist for the collection and identification of the plant for their research work.

Keywords: *assessment, angiosperm weeds, medicinal plants, Rajshahi, Bangladesh*

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1. Introduction

Weed is the generic word for a plant growing in a spot where it is not wanted. The most prominent use of the word is in connection with farming where weeds may damage crops when growing in fields and poison domesticated animals when growing on pasture land. Many weeds are short-lived annual plants, that normally take advantage of temporarily bare soil to produce another generation of seeds before the soil is covered over again by slower growth; with the advent of agriculture, with extensive areas of ploughed soil exposed every year, the opportunities for such plants have been greatly expanded [3].

Etymologically, "weed" derives from the Old English word for "grass" or "herb," but during the Middle Ages the meaning has changed to indicate an undesirable plant that grows where it is not wanted, especially among agricultural plots. This has historically been the primary meaning of the word, although in the nineteenth century, American writers grew increasingly aware that calling a plant a "weed" was an arbitrary human judgment, as there is no natural category of weeds. In the words of Ralph Waldo Emerson, a weed "is a plant whose virtues have not yet been discovered." Today, biologists tend to share that opinion, since many of the plants that are designated as weeds are, in fact, closely related to popular crops. Indeed, "weed" has fallen out of usage among biologists, although

those who study agriculture still find the term useful in discussions of weed control and management [24].

Generally a plant growing where it is not wanted is considered as weed. The notion of weeds as unnecessary plants was originated when man started to intentionally grow plants for food. Weeds are unnecessary plants because they are dropping crop yield by competing with crop plants for common resources such as water, mineral nutrients, space and light [13].

The plants of Rajshahi exhibit diverse habitats, such as wetland, scrub jungles, fallow lands etc. which support luxuriant formation of angiosperms and play a vital role in the local economy, environment and primary healthcare system. The importance of studying local floristic diversity has been realized and carried out in Bangladesh by [8,9,16,22,23]. Recently [17,18,20,21] conducted the inventorying of angiosperm diversity of Dhamrai Upazilla of Dhaka and Runcitia Sal forest of Bangladesh. The present study will be made an inventory of the angiosperm weeds of Rajshahi, Bangladesh.

2. Materials and Methods

Assessment of angiosperm weeds growing throughout in the Rajshahi, Bangladesh was carried out from January 2010 to December 2011. A total of 155 species under 125 genera and 50 families were collected and identified. A survey on the determination of the location of different species was made and a list was prepared to be acquainted with the plants available in the selected area. All the species were noted

and time to time the areas were visited to see when they flowered. For the morphological study, different types of species were examined again and again in order to see if there was any variation or not. They were collected at flowering stages and herbarium specimens were prepared as vouchers. In this practice standard method was followed. In this regard different types of plant species were collected from different habitats. All the collected plant specimens were kept in the Herbarium, Department of Botany, and University of Rajshahi, Bangladesh.

The collected specimens were identified studying related taxonomic books and booklets from the library of Rajshahi University. The major collected materials were identified and described up to species with the help of [1,2,4,5,7,10,12,13,14,15,19] were consulted. For the current name and up to date nomenclature [1,6,11] were also consulted.

3. Results and Discussion

In the present paper occurrence of 155 angiosperm weed species under 125 genera and 50 families were recorded. Of these, Magnoliid Complex (Eudicots) [7] was represented by 138 species under 109 genera and 43 families while (Monocots) [7] was represented by 17

species under 16 genera and 7 families. Asteraceae were the largest family in Euasterids II [7] represented by 27 species and Araceae were the largest family in Alismatales [7] represented by 6 species. An enumeration of the species recorded was presented with scientific name, bengali name, family, population, flowering time and voucher numbers. Out of the total number of species 98 were frequent, 41 were abundant, 15 were rare and 1 was very rare species in the study area (Table 1).

Distribution of angiosperm species in the families shows variation. The family Asteraceae is represented by 27 species, Fabaceae is represented by 14 species, Acanthaceae by 11 species, Amaranthaceae by 9 species, and each of Lamiaceae, Solanaceae and Araceae is represented by 6 species. Euphorbiaceae is represented by 5 species; A single species in each was recorded by 24 families while two to four species in each was recorded by 18 families (Table 1).

Among the species studied *Blumea laciniata* (Roxb.) DC., *Cyanthillium cinerum* (L.) H. Rob., *Sphagnetica trilobata* (L.) Pruski. and *Wedelia biflora* L. have been reported here for the first time from Rajshahi, and *Parthenium hysterophorus* Linn. was a new record from Bangladesh.

Table 1. Assessment of angiosperm weeds of Rajshahi, Bangladesh

S/N	Family name	Scientific name	Local name	Plant population	Flowering time	Voucher number
1	Acanthaceae	<i>Andrographis paniculata</i> Nees in Wall.	Kalomegh	Frequent	Jul.- Jan.	MR 81
2	Acanthaceae	<i>Barleria prioniitis</i> L.	Kanta-janti	Abundant	Nov.- Feb.	MR 124
3	Acanthaceae	<i>Hemigraphis hirta</i> (Vahl) T.Anderson	Hemigraphis	Frequent	Jan.-Jul.	MR 47
4	Acanthaceae	<i>Hygrophila schulli</i> M.R. & S.N. Almeida	Talmakhna	Frequent	Oct.- Jan.	MR 121
5	Acanthaceae	<i>Justicia adhatoda</i> L.	Basak	Frequent	Jan.-Apr.	MR 82
6	Acanthaceae	<i>Justicia gendarussa</i> Burm.f.	Jagathmadan	Abundant	Dec.-May	MR 146
7	Acanthaceae	<i>Nelsonia canescens</i> (Lamk.) Spreng.	Paramul	Frequent	Oct.- Feb.	MR 26
8	Acanthaceae	<i>Phyla nodiflora</i> (L.) Greene	Bhui-okra	Abundant	Jun.- Aug.	MR 33
9	Acanthaceae	<i>Rungia pectinata</i> (L.) Nees.	Pindi	Abundant	Nov.- May	MR 27
10	Acanthaceae	<i>Rungia repens</i> (L.) Nees.	Par-patha	Frequent	Jan.-May	MR 100
11	Acanthaceae	<i>Ruellia tuberosa</i> L.	Chatpoty	Frequent	Jan.-Dec.	MR 164
12	Amaranthaceae	<i>Achyranthes aspera</i> L.	Apang	Abundant	Jan.-Dec.	MR 87
13	Amaranthaceae	<i>Aerva sanguinolenta</i> (L.) Blume	Chaya	Rare	Apr.- Jul.	MR 54
14	Amaranthaceae	<i>Alternanthera sessilis</i> (L.) R. Brown ex Candolle	Chanchi	Abundant	Jan.-Dec.	MR 147
15	Amaranthaceae	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Malancha shak	Frequent	Mar.- Jun.	MR 56
16	Amaranthaceae	<i>Amaranthus spinosus</i> L.	Kantanotey	Frequent	Jan.-Dec.	MR 120
17	Amaranthaceae	<i>Amaranthus lividus</i> L.	Goburanotey	Abundant	Jan.-Apr.	MR 145
18	Amaranthaceae	<i>Amaranthus viridis</i> L.	Shaknotey	Frequent	Jan.-Dec.	MR 83
19	Amaranthaceae	<i>Cyathula prostrata</i> (L.) Blume	Boroapang	Rare	Sep.- Nov.	MR 44
20	Amaranthaceae	<i>Digera muricata</i> (L.) Mart.	Digera	Rare	Feb.-Jul.	MR 72
21	Apiaceae	<i>Centella asiatica</i> (L.) Urban in Mart	Thankuni	Frequent	Mar.- Dec.	MR 139
22	Apocynaceae	<i>Ichnocarpus frutescens</i> (L.) R. Br.	Loilata	Rare	Jan.-Dec.	MR 34
23	Apocynaceae	<i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz.	Sarpagandha	Frequent	Apr.- Oct.	MR 16
24	Araceae	<i>Alocasia indica</i> (Loureiro.) Spach	Mankochu	Frequent	Aug.-Oct.	MR 85
25	Araceae	<i>Amorphophallus campanulatus</i> Blume	Olkachu	Frequent	Sep.-Apr.	MR 58
26	Araceae	<i>Colocasia esculenta</i> (L.) Schott.	Kochu	Abundant	Dec.-Mar.	MR 130
27	Araceae	<i>Lemna perpusilla</i> Torr.	Lemna	Frequent	Jan.- Aug.	MR 84
28	Araceae	<i>Pistia stratiotes</i> L.	Khudipana	Frequent	Feb.- Mar.	MR 162
29	Araceae	<i>Typhonium trilobatum</i> (L.) Schott.	Ghetkochu	Frequent	Jan.-Dec.	MR 06
30	Aristolachiaceae	<i>Aristolochia indica</i> L.	Isharmul	Very rare	Aug.- Nov.	MR 60
31	Asteraceae	<i>Ageratum conyzoides</i> (L.)L.	Ochunti, Fulkuri	Abundant	Nov.- Jan.	MR 118
32	Asteraceae	<i>Blumea lacera</i> (Burm.f.) DC. in Wight	Kukshim	Abundant	Nov.- Jul.	MR 79
33	Asteraceae	<i>Blumea laciniata</i> (Roxb.) DC.	Kukshim	Frequent	Jan.-Dec.	MR 65
34	Asteraceae	<i>Chromolaena odorata</i> (L.) King & Robinson	Assam-lata	Frequent	Nov.-May	MR 64
35	Asteraceae	<i>Cirsium arvense</i> (L.) Scop.	Shial-kanta	Abundant	Feb.-Jun	MR 137

36	Asteraceae	<i>Eclipta alba</i> (L.) Hassk	Kalokeshi	Frequent	Jan.-Dec.	MR 53
37	Asteraceae	<i>Emilia sonchifolia</i> (L.) DC. in Waight	Emilia, Sadimudi	Frequent	Jan.-Dec.	MR 138
38	Asteraceae	<i>Enhydra fluctuans</i> Lour.	Helenchha	Frequent	Jan.- Apr.	MR 40
39	Asteraceae	<i>Ethulia conyzoides</i> L.	Ethulia	Rare	Jan.-May	MR 127
40	Asteraceae	<i>Gnaphalium polycaulon</i> Pers.	Bara kamra	Abundant	Mar.- Aug.	MR 142
41	Asteraceae	<i>Gnaphalium pulvinatum</i> Delile.	Bara kamra	Frequent	Feb.- Mar.	MR 123
42	Asteraceae	<i>Grangea maderespatana</i> (L.) Poir.	Namuti	Frequent	Dec.-May	MR 36
43	Asteraceae	<i>Launaea aspleniifolia</i> (Willd.) Hook. f.	Tik-chana	Frequent	Jan.- Aug.	MR 43
44	Asteraceae	<i>Mikania cordata</i> (Burm.f.) Robinson	Asamlata	Abundant	Oct.- Feb.	MR 39
45	Asteraceae	<i>Parthenium hysterophorus</i> L	Gandi-boti	Abundant	Jan.-Dec.	MR 22
46	Asteraceae	<i>Sonchus arvensis</i> L.	Not Known	Frequent	Nov.- Jun.	MR 21
47	Asteraceae	<i>Sonchus asper</i> (L.) Hill.	Sonchus	Abundant	Sep.- Jun.	MR 106
48	Asteraceae	<i>Spilanthes calva</i> DC. in Wight	Surja Kannya	Abundant	Jan.-Dec.	MR 170
49	Asteraceae	<i>Synedrella nodiflora</i> (L.) Gaertn	Synedrella	Abundant	Jan.-Dec.	MR 08
50	Asteraceae	<i>Tridax procumbens</i> L.	Tridhara	Abundant	Jan.-Dec.	MR 93
51	Asteraceae	<i>Cyanthillium cinerum</i> (L.) H. Rob.	Kuksim	Abundant	Jan.-Dec.	MR 174
52	Asteraceae	<i>Lepidaploa remotiflora</i> (L.C. Rich.) H. Rob.	Kuksim	Abundant	Jan.-Dec.	MR 91
53	Asteraceae	<i>Wedelia biflora</i> (L.) DC. in Wight.	Wedelia	Rare	May-Jul.	MR 176
54	Asteraceae	<i>Sphagneticola trilobata</i> (L.) Pruski.	Mohavringaraj	Abundant	Mar.-Aug.	MR 89
55	Asteraceae	<i>Wedelia chinensis</i> (Osbeck) Merr.	Mohavringaraj	Frequent	Jan.-Dec	MR 02
56	Asteraceae	<i>Xanthium indicum</i> Koenig in Roxb.	Ghagra, Hagra	Abundant	Jan.-Dec	MR 13
57	Asteraceae	<i>Youngia japonica</i> (L.) DC.	Youngia	Abundant	Aug.-Jan.	MR 114
58	Boraginaceae	<i>Heliotropium indicum</i> L.	Hatisur	Abundant	Jan.-Dec.	MR 80
59	Capparaceae	<i>Cleome viscosa</i> L.	Hurhuria	Frequent	Jun.- Aug.	MR 50
60	Chenopodiaceae	<i>Chenopodium album</i> L.	Batuasak	Abundant	Jan.- Mar.	MR 75
61	Chenopodiaceae	<i>Chenopodium ambrosioides</i> L.	Banbatua	Frequent	Jan.- Apr.	MR 63
62	Commelinaceae	<i>Commelina benghalensis</i> L.	Kanshira	Frequent	Feb.-Jul.	MR 135
63	Convolvulaceae	<i>Evolvulus nummularius</i> (L.) L.	Evolvulus	Frequent	Jun.- Aug.	MR 140
64	Convolvulaceae	<i>Ipomoea aquatica</i> Forsk.	Kalmishak	Frequent	Nov.-Apr.	MR 45
65	Costaceae	<i>Costus speciosus</i> (Koenig ex Retz.) Smith.	Kushtha	Rare	Nov.-Mar.	MR 59
66	Crassulaceae	<i>Kalanchoe pinnata</i> (Lamk.) Pers.	Patharkuchi	Frequent	Jun.- Sep.	MR 119
67	Cucurbitaceae	<i>Coccinia grandis</i> (L.) Voigt.	Telakucha	Frequent	May-Oct.	MR 66
68	Cucurbitaceae	<i>Cucumis callosus</i> (Rottler) Cogn.	Banbangi	Frequent	Jan.-Apr.	MR 46
69	Cucurbitaceae	<i>Melothria maderaspatana</i> (L.) Cogn.	Melothria	Frequent	Feb.-Jul.	MR 28
70	Cuscutaceae	<i>Cuscuta reflexa</i> Roxb.	Sarnalata	Rare	Jan.-Dec.	MR 134
71	Cyperaceae	<i>Cyperus rotundus</i> L.	Muthaghas	Abundant	Jan.-Dec.	MR 57
72	Cyperaceae	<i>Scirpus articulatus</i> L.	Chechur	Frequent	Jan.-Dec.	MR 14
73	Cyperaceae	<i>Scirpus grossus</i> L. f.	Scirpus	Frequent	Jan.-Dec.	MR 25
74	Euphorbiaceae	<i>Acalypha indica</i> L.	Muktajhuri	Abundant	Sep.- Jun.	MR 73
75	Euphorbiaceae	<i>Chrozophora plicata</i> (Vahl.) A. Juss. ex Spreng	Khudi-okra	Frequent	Mar.-Jun	MR 128
76	Euphorbiaceae	<i>Croton bonplandianum</i> Baill.	Banjhal	Frequent	Jan.-Dec.	MR 68
77	Euphorbiaceae	<i>Euphorbia hirta</i> L.	Dudhiya	Frequent	Oct.-May	MR 51
78	Euphorbiaceae	<i>Euphorbia thymifolia</i> L.	Dudhiya	Frequent	Oct.-May	MR 76
79	Fabaceae	<i>Abrus precatorius</i> L	Kuch	Rare	Jul.- Sep.	MR 116
80	Fabaceae	<i>Alysicarpus vaginalis</i> (L.) DC.	Pan-nata	Frequent	Jul.- Aug.	MR 71
81	Fabaceae	<i>Desmodium triflorum</i> (L.) Candolle	Kalilata	Abundant	Mar.-May	MR 136
82	Fabaceae	<i>Desmodium gangeticum</i> (L.) DC.	Borokalilata	Abundant	Mar.-May	MR 129
83	Fabaceae	<i>Vicia sativa</i> L.	Ankari	Frequent	Dec.- Feb.	MR 04
84	Fabaceae	<i>Vicia hirsuta</i> L.	Vicia	Frequent	Dec.- Mar.	MR 15
85	Fabaceae	<i>Vigna trilobata</i> (L.) Verdc.	Vigna	Frequent	Dec.- Mar.	MR 112
86	Fabaceae	<i>Melilotus indica</i> (L.) All.	Ban-methi	Frequent	Jan.- Feb.	MR 115
87	Fabaceae	<i>Mimosa pudica</i> L	Lajjaboti	Frequent	Aug.- Nov.	MR 88
88	Fabaceae	<i>Senna sophera</i> (L.) Roxb.	Kolkashundha	Frequent	Jul.- Aug.	MR 23
89	Fabaceae	<i>Senna tora</i> (L.) Roxb.	Chakunda	Frequent	Sep.-Nov.	MR 104
90	Fabaceae	<i>Senna occidentalis</i> Roxb.	Chakunda	Frequent	Sep.- Nov.	MR 168
91	Fabaceae	<i>Sesbania bispinosa</i> Jacq.	Dhunchi	Frequent	May.-Oct.	MR 19
92	Fabaceae	<i>Uraria picta</i> (Jacq.) Desv. ex DC.	Uraria	Frequent	Jan.-Dec.	MR 17
93	Fumariaceae	<i>Fumaria officinalis</i> L.	Ban-salpa	Frequent	Feb.-Apr.	MR 38
94	Gentianaceae	<i>Exacum pedunculatum</i> L.	Exacum	Frequent	Feb.- Mar.	MR 125
95	Hydrocharitaceae	<i>Ottelia alismoides</i> (L.) Pers.	Ottelia	Frequent	Jan.-Dec.	MR 24
96	Lamiaceae	<i>Leonurus sibiricus</i> L.	Roktodron	Frequent	Dec.- Mar.	MR 148
97	Lamiaceae	<i>Leucas cephalotes</i> (Roth.) Spreng	Bara halkusa	Frequent	Jan.- Feb.	MR 117
98	Lamiaceae	<i>Leucas aspera</i> (Willd) Link.	Shetodron	Abundant	Mar.- Aug.	MR 30
99	Lamiaceae	<i>Ocimum basilicum</i> L.	Babui tulsi	Frequent	Jan.-Dec.	MR 90
100	Lamiaceae	<i>Ocimum tenuiflorum</i> L.	Tulshi	Frequent	Apr.-Jun.	MR 154
101	Lamiaceae	<i>Salvia plebeja</i> R. Br.	Salvia	Frequent	Jan.-Dec.	MR 101

102	Linderniaceae	<i>Lindernia crustacea</i> (L.) F. Muell.	Lindernia	Frequent	Jan.-Dec.	MR 41
103	Lythraceae	<i>Ammannia baccifera</i> L.	Jangli-mehedi	Frequent	Apr.- Jul.	MR 69
104	Malvaceae	<i>Abutilon indicum</i> (L.) Sweet	Petari	Frequent	Oct.- Dec.	MR 52
105	Malvaceae	<i>Sida acuta</i> Brum. f.	Kureta	Frequent	Sep.- Jan.	MR 97
106	Malvaceae	<i>Sida cordata</i> (Burm. f.) Borss.	Junka	Frequent	Sep.- Oct.	MR 10
107	Malvaceae	<i>Urena lobata</i> L.	Banokra	Frequent	Sep.- Oct.	MR 110
108	Menispermaceae	<i>Stephania japonica</i> (Thunb.) Miers.	Akarnandi	Frequent	Jan.-Dec.	MR 95
109	Menispermaceae	<i>Tinospora cordifolia</i> (Willd.) Hook. f. & Thomas	Gulancha	Abundant	Jun.- Feb.	MR 172
110	Molluginaceae	<i>Glinus oppositifolius</i> (L.) A. DC.	Gimashak	Rare	Mar.-Jul.	MR 49
111	Molluginaceae	<i>Mollugo pentaphylla</i> L.	Mollugo	Frequent	Mar.-Jul.	MR 152
112	Nyctaginaceae	<i>Boerhaavia repens</i> L.	Punarnava	Frequent	Jan.-Dec.	MR 62
113	Onagraceae	<i>Ludwigia adscendens</i> (L.) Hara.	Ludwigia	Frequent	Jan.-Dec.	MR 86
114	Onagraceae	<i>Ludwigia perennis</i> L.	Ludwigia	Frequent	Jan.-Dec.	MR 150
115	Oxalidaceae	<i>Biophytum sensitivum</i> (L.) DC.	Panilajuk	Rare	Sep.- Mar.	MR 141
116	Oxalidaceae	<i>Oxalis corniculata</i> L.	Amrul	Abundant	Sep.-Mar.	MR 35
117	Oxalidaceae	<i>Oxalis rubra</i> A. St. Hil.	Baroamrul	Abundant	Sep.-Mar.	MR 92
118	Papaveraceae	<i>Argemone mexicana</i> L.	Sialkata	Frequent	Feb.- Apr.	MR 67
119	Passifloraceae	<i>Passiflora foetida</i> L.	Jhumkolata	Rare	Jan.-Oct.	MR 156
120	Phyllanthaceae	<i>Phyllanthus niruri</i> L.	Bhui-amla	Frequent	Apr.- Sep.	MR 94
121	Phyllanthaceae	<i>Phyllanthus urinaria</i> L.	Hazar-mani	Frequent	Feb.- Mar.	MR 158
122	Phyllanthaceae	<i>Phyllanthus reticulatus</i> Poir.	Sitki	Frequent	Feb.- Mar.	MR 107
123	Phyllanthaceae	<i>Phyllanthus virgatus</i> G. Forst.	Chitki	Frequent	Feb.- Mar.	MR 20
124	Piperaceae	<i>Peperomia pellucida</i> (L.) H.B.K.	Peperomia	Frequent	Jan.- Mar.	MR 109
125	Poaceae	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	Premkata	Abundant	Jan.-Dec.	MR 70
126	Poaceae	<i>Cynodon dactylon</i> (L.) Pers.	Durbaghas	Abundant	Jan.-Dec.	MR 131
127	Poaceae	<i>Oplismenus compositus</i> (L.) P. Beauv.	Oplismenus	Abundant	Jan.-Dec.	MR 111
128	Polygonaceae	<i>Polygonum barbatum</i> L.	Biskatali	Abundant	Jun.- Dec.	MR 31
129	Polygonaceae	<i>Polygonum hydropiper</i> L.	Biskatali	Frequent	Jul.- Sep.	MR 96
130	Polygonaceae	<i>Polygonum orientale</i> L.	Borobiskatali	Frequent	Jan.-Mar.	MR 160
131	Polygonaceae	<i>Polygonum plebejum</i> R. Br.	Raniphul	Rare	Jan.-Apr.	MR 105
132	Pontederiaceae	<i>Eichhornia crassipes</i> (Mart.) Solms.	Kochuripana	Abundant	Jan.-Dec.	MR 74
133	Pontederiaceae	<i>Monochoria hastata</i> (L.) Solms.	Monocoria	Frequent	Mar.-Jul.	MR 113
134	Portulacaceae	<i>Portulaca oleracea</i> L.	Nuniashak	Frequent	Sep.- Mar.	MR 18
135	Primulaceae	<i>Anagallis arvensis</i> L.	Anagalis	Frequent	Jan.-Mar.	MR 122
136	Primulaceae	<i>Androsace saxifragaefolia</i> Bunge	Androsace	Frequent	Apr.-Jul.	MR 143
137	Ranunculaceae	<i>Ranunculus sceleratus</i> L.	Ranunculus	Frequent	Feb.- Mar.	MR 103
138	Rutaceae	<i>Glycosmis pentaphylla</i> (Retz.) DC.	Atishora	Frequent	Jan.-Dec.	MR 78
139	Sapindaceae	<i>Cardiospermum halicacabum</i> L.	Sibjhul, Nayaphutki	Frequent	May-Jul.	MR 126
140	Scrophulariaceae	<i>Dopatrium junceum</i> (Roxb.) Buch.-Ham. ex Benth.	Dopatrium	Frequent	Jan.-Dec.	MR 42
141	Scrophulariaceae	<i>Herpestis chamaedroides</i> Kunth.	Herpestis	Frequent	Jan.-Dec.	MR 144
142	Scrophulariaceae	<i>Scoparia dulcis</i> L.	Bandhoney	Frequent	Jan.-May	MR 102
143	Smilacaceae	<i>Smilax zeylanica</i> L.	Kumarilata	Rare	Jul.- Dec.	MR 108
144	Solanaceae	<i>Datura metel</i> L.	Dhutra	Frequent	Jul.-Dec.	MR 55
145	Solanaceae	<i>Nicotiana plumbaginifolia</i> Viv.	Bantamak	Abundant	Mar.-Jun.	MR 37
146	Solanaceae	<i>Physalis minima</i> L.	Kapalphutki	Frequent	Sep.- Dec.	MR 29
147	Solanaceae	<i>Solanum nigrum</i> L.	Titbegun	Abundant	Jan.-Dec.	MR 166
148	Solanaceae	<i>Solanum filicifolium</i> L.	Titbegun	Abundant	Jan.-Dec.	MR 99
149	Solanaceae	<i>Solanum surattense</i> Burm. f.	Titbegun	Frequent	Jan.-Dec.	MR 12
150	Tiliaceae	<i>Corchorus acutangulus</i> Lamk.	Banpat	Frequent	Mar.- Jun.	MR 48
151	Urticaceae	<i>Pouzolzia indica</i> (L.) Bennett & R. Br.	Pouzolzia	Frequent	May- Sep.	MR 98
152	Verbenaceae	<i>Clerodendrum viscosum</i> Vent.	Bhat	Abundant	Feb.- Mar.	MR 61
153	Verbenaceae	<i>Lantana camara</i> L.	Chotra	Frequent	Sep.-Dec.	MR 32
154	Vitaceae	<i>Cayratia trifolia</i> (L.) Domin.	Banangur	Frequent	Jun.-Sep.	MR 132
155	Vitaceae	<i>Cissus quadrangularis</i> L.	Harjora	Rare	Aug.- Sep.	MR 133

[Jan.=January, Feb.=February, Mar.=March, Apr.=April, May=May, Jun.=June, Jul.=July, Aug.=August, Sep.=September, Oct.=October, Nov.=November, Dec.=December]

3.1. Medicinally Important Weeds

The important medicinal weedy plants of Rajshahi were carried out. A total of 50 medicinal plant species belonging to 46 genera and 31 families were collected and recorded for their use in various ailments. Most of the local people in the study area are poor and illiterate. In one hand, these people are out of the reach of modern

medicines and on other hand, the market price of most available medicines are very expensive. As a result, these medicinal plants are used by them to cure following the diseases, especially for abscess, asthma, abortion, cough, cold, small pox, constipation, dysentery, diarrhea, diabetes, eczema, fever, and fracture of bone, headache, heart disease, itches, jaundice, menstrual disease, paralysis, piles, skin diseases, snake-bite, toothache, vomiting, worm, wound and others. Different plant parts of different spp.

are used as medicine for treating various diseases; bark of 3, leaf of 34, fruit of 3, root of 19, seed of 1, latex of 2, stem of 5, mucilage of 1, inflorescence 1, rhizome 1, tuber

2 and whole plant of 13 species were used as medicine (Table 2).

Table 2. Medicinal angiosperm weeds used by local people of Rajshahi, Bangladesh

S/N	Plant species	Family name	Parts used	Diseases to be treated
1	<i>Abrus precatorius</i> L.	Fabaceae	SD	Paralysis
2	<i>Achyranthes aspera</i> L.	Amaranthaceae	L, B, F	Sciatica, abortion, eczema and wound.
3	<i>Acalypha indica</i> L.	Euphorbiaceae	L	Skin disease
4	<i>Aloe vera</i> L.	Aloaceae	L, M	Beautification, tonic, anthelmintic, wound and itches.
5	<i>Amaranthus spinosus</i> L.	Amaranthaceae	WP	Asthma and cold fever.
6	<i>Amaranthus lividus</i> Willd.	Amaranthaceae	R	Menstrual flow
7	<i>Amaranthus viridis</i> L.	Amaranthaceae	L	Demulcent, diuretic, snake-bite
8	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	Acanthaceae	L, WP	Wound, ring worm, itches, fever, dysentery, diarrhea and tonic.
9	<i>Argemone mexicana</i> L.	Papaveraceae	S, R, LA	Fever, cold, jaundice, diabetes, tonic, diuretic, pain killer, wound, skin disease and itches.
10	<i>Aristolachia indica</i> L.	Aristolachiaceae	L, S	Cough, inflammations, biliousness, ulcers, eczema
11	<i>Asparagus racemosus</i> L.	Asparagaceae	B, R	Tonic, blood dysentery, diabetes, jaundice, diarrhea, promotes lactation in mother, wound and itches.
12	<i>Boerhaavia repens</i> L.	Nyctaginaceae	WP, R, L	Stomachic, laxative, emetic, diuretic, dropsy, pain, dysentery, epilepsy, jaundice, anemia, ophthalmia, gonorrhoea
13	<i>Blumea laciniata</i> (Roxb.) DC	Asteraceae	WP, R	Bronchitis, blood diseases, fevers, burning sensation, mouth ulcers
14	<i>Centella asiatica</i> (L.) Urban	Apiaceae	L, WP	Dysentery, headache, itches and eczema.
15	<i>Cissuss quadrangularis</i> Wall.	Vitaceae	S	Bone fracture and gout.
16	<i>Coccinia grandis</i> L.	Cucurbitaceae	L, R	Fever, diabetes, cough, asthma and dysentery.
17	<i>Calotropis procera</i> Br.	Asclepiadaceae	L, R, LA	Pain, dysentery and injury,
18	<i>Costus speciosus</i> Sm.	Costaceae	Rh	Diabetes, high fever
19	<i>Colocasia esculenta</i> (L.) Schott.	Araceae	L, T	Constipation, colic, digestive,
20	<i>Cuscuta reflexa</i> L.	Cuscutaceae	WP	Liver disease
21	<i>Datura metel</i> L.	Solanaceae	L	Wound and earache.
22	<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	T, L	Bone fracture, boils.
23	<i>Eclipta alba</i> (L.) Hassk.	Asteraceae	L, WP	Wound, itches, skin disease, colour of hairs, jaundice, asthma and gall bladder stone.
24	<i>Euphorbia hirta</i> L.	Euphorbiaceae	L	Bronchitis, cough
25	<i>Glycosmis pentaphylla</i> (Retz.) A. DC.	Rutaceae	L, F	Dysentery, cough, fever, jaundice, rheumatism, eczema and skin disease.
26	<i>Grangea maderespatana</i> (L.) Poir.	Asteraceae	WP, L	Ovarian disorder, earache, cough, emmenagogue
27	<i>Heliotropium indicum</i> L.	Boraginaceae	L	Fever, skin disease
28	<i>Justicia adhatoda</i> Wall in Nees.	Acanthaceae	L, B	Cough, asthma, vomiting and worm
29	<i>Justicia gendarussa</i> L.	Acanthaceae	L	Asthma, rheumatism, wound and itches.
30	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	L	Cold, cough, diabetes, diuretic, blood dysentery and wound.
31	<i>Leucas aspera</i> L.	Lamiaceae	L	Fever, worm
32	<i>Leucas cephalotes</i> (Roth.) Spreng	Lamiaceae	L, R	Asthma, cough
33	<i>Mimosa pudica</i> L.	Fabaceae	L, R	Fever, snake-bite and dysentery
34	<i>Mikania cordata</i> (Burm.f) Robinson	Asteraceae	L	Cut injury
35	<i>Ocimum sanctum</i> L.	Lamiaceae	L, R	Cold, cough, itches, ringworm, earache, wound and fever.
36	<i>Oxalis corniculata</i> L.	Oxalidaceae	L	Cough, scabies, itches, dysentery, anemia, piles, dyspepsia and fever.
37	<i>Parthenium hysterophorus</i> L.	Asteraceae	WP, R	Tonic, febrifuge, emmenagogue, dysentery
38	<i>Polygonum hydropiper</i> L.	Polygonaceae	L	Insects-bite
39	<i>Portulaca quadrifida</i> L.	Portulacaceae	WP	Diuretic, dysentery, diseases of liver, spleen, kidney, scurvy, piles
40	<i>Rauwolfia serpentina</i> Benth.	Apocynaceae	R	Blood pressure, tonic, diarrhea, dysentery, colic and fever.
41	<i>Stephania japonica</i> (Thunb.) Miers.	Menispermaceae	R, L	Astringent, fever, diarrhea, dyspepsia, abscess, vertigo, dysentery
42	<i>Scoparia dulcis</i> L.	Scrophulariaceae	R	Snake-bite
43	<i>Senna sophera</i> L.	Fabaceae	L, R	Fever, diuretic, ringworm and sore.
44	<i>Smilax zeylanica</i> L.	Smilacaceae	R	Blood dysentery and abscess.
45	<i>Solanum torvum</i> Swartz.	Solanaceae	R	Menstruation problems, diabetes
46	<i>Spilanthes calva</i> DC.	Asteraceae	I	Toothache
47	<i>Tinospora cordifolia</i> Miers.	Menispermaceae	WP, S	Stomachic, febrifuge, tonic, fever, skin disease, rheumatism, heart disease, jaundice, burning sensation, colic, dropsy
48	<i>Vitex negundo</i> L.	Verbenaceae	L, R	Cold, cough, asthma, tonic, fever and diuretic.
49	<i>Wedelia chinensis</i> (Osbeck) Merr.	Asteraceae	WP, L	Hair disease, jaundice, fevers, astringent, haemorrhages, toothache, asthma, bronchitis
50	<i>Xanthium indicum</i> Koen ex Roxb	Asteraceae	WP, S, F, R, L	Diabetes, bitter, tonic, cancer, small-pox, snake-bite, insect-bite, ulcers, boils, abscess, herpes

L=Leaf, S=Stem, R=Root, SD=Seed, LA=Latex, WP=Whole plant, F=Fruit, B=Bark, T=Tuber, Rh=Rhizome, I=Inflorescenc

4. Conclusions

Assessment of angiosperm weeds of Rajshahi, Bangladesh has been studied. A total of 155 angiosperm weed species under 125 genera and 50 families were

recorded. Fifty (50) medicinal plants have been documented with their uses for the cure of more than 61 diseases, and some of these are abscess, asthma, abortion, cough, cold, small pox, constipation, dysentery, diarrhea, diabetes, eczema, fever, and fracture of bone, headache, heart disease, itches, jaundice, menstrual disease, paralysis, piles, skin diseases, snake-bite, toothache, vomiting, worm,

wound and others. This detailed information will be helpful for the pharmacognosist, botanist, ethno-botanist and pharmacologist for the collection and identification of the plant for their research work.

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