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Weed Flora of Small Tea Gardens of North Lakhimpur District, Assam and its Traditional Medicinal Demands

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Abstract- Tea is a commercial crop so every tea grower is trying to complete eradication of unwanted weeds from his garden area for his economic benefit. To control these weeds, different kinds of herbicides are using by tea growers as per their requirements but when these unwanted plant species get favourable environmental conditions and negligence of tea growers they grow in large numbers in a very short period. Amongst these weeds, some are pharmacologically very important because these are rich in plant secondary metabolites. Some Indigenous community, peoples of North Lakhimpur district of Assam using these unwanted plants in better health services, traditionally. In tea garden, I have identified 71 weed species belonging to 36 families by observation method and some of them are using as leafy vegetables as well as traditional herbal medicines by indigenous community peoples of these tea garden area of North Lakhimpur district of Assam.15 species are found traditionally very high demandable medicinal plants.

Keywords- Weeds of tea gardens, local medicinal demands.

I. INTRODUCTION

Management of weed vegetation in tea garden is a challenging task to researchers due to its unwanted feature of farmers. Weeds are growing by their own efforts and compete with cultivated crops for their nutrients and natural habitats. Weeds affect the tea production negatively. However, some species of weeds are endemic and beneficial to the people. Many of them are using in traditional herbal medicines as well as vegetables by the local communities.

Assam is surrounded by hills and green mountains of North East India. In the state of Assam, North Lakhimpur is located at northern bank of Brahmaputra river. North Lakhimpur is biologically rich in its diverse flora and fauna due to its fertile soil of river valley of Brahmaputra. The climate and favourable environmental conditions also influencing the growth of large varieties of weed flora. Simultaneously, chemical fertilizers and biofertilizers, using in tea garden, are greatly enhancing the physiological growth of weed flora.

II. MATERIALS AND METHODS

This study was conducted in 5 different small tea gardens of the Gharmara village of Dhakuakhana block in North Lakhimpur district of Assam.

Extensive field visit was done in this summer season to collecting the data. Data was collected by field observation method. For identification purpose, I had collected only one plant (whole) or a part of each species without disturbing any natural habitats of weeds.

III. RESULTS

During this study following weed species were observed in small tea gardens of Gharmara village, North Lakhimpur.

Table 1: Table showing the scientific name of weeds, their families, the vernacular name of each and their local medicinal demands with serial number.

Serial no.	Scientific name	Family name	Vernacular name	Local medicinal demand
1	Abroma Augusta	Sterculiaceae	Gorokhia bon	Unknown
2	Achyranthes aspera	Amaranthaceae	Hatisuriya	Unknown
3	Acmella oleracia	Asteraceae	Marsang sak	High
4	Ageratum haustonianum	Asteraceae	Gendhali bon	Moderate
5	Alocasia macrorrhizos	Araceae	Mankosu	Low
6	Alternanthera sessilis	Amaranthaceae	Mati kadori	Moderate
7	Altingia excelsa	Altingiaceae	Jutuli poka	Unknown
8	Amaranthus spinosus	Amaranthaceae	Khutura	Low
9	Asperagus racemosus	Liliaceae	Satamul	High
10	Axonopus compressus	Poaceae	Dolichabon	Low
11	Azanza lampas	Malvaceae	Bon kopah	Unknown
12	Blechnum orientale	Blechnaceae	Dhekiya	Moderate
13	Boerhaavia coccinea	Nyctaginaceae	Ponounua	Unknown
14	Borreria hispida	Rubiaceae	Gahoribon	Unknown
15	Byttneria grandifolia	Sterculiaceae	Tikoni borua sak	Low
16	Cassia alata	Cesalpiniaceae	Bor medelua	Moderate
17	Cassia tora	Leguminosae	Horu medelua	Low

18	Centella asiatica	Apiaceae	Bor Manimuni	High
19	Cheilocostus speciosus	Costaceae	Jom lakhuti, insulin gos	High
20	Chenopodium album	Chenopodiaceae	Jilimili sak	Unknown
21	Chromolaena odorata	Asteraceae	Bagh dhoka	High
22	Clerodendrum colebrookianum	Verbenaceae	Nefafu	High
23	Colocasia esculanta	Araceae	Bonoriya kosu	High
24	Commenlina benghalensis	Commelinaceae	Kona himolu	High
25	Cymbopogon flexuosus	Poaceae	Lemon ghah	Low
26	Cynodon dactylon	Poaceae	Duboribon	Moderate
27	Dicanthium sp	Poaceae	Sheda ghah	Unknown

28	Digitaria setigera	Poaceae	Kahi bon	Unknown
29	Dimetia scandens	Rubiaceae	Bhedeli lota	Low
30	Drymaria cordata	Caryophyllaceae	Lai jabori	High
31	Eclipta alba	Asteraceae	Kenhraj	Unknown
32	Eupatorium odoratum	Asteraceae	Jarmani bon	Moderate
33	Euphorbia hirta	Euphorbiaceae	Gakhiroti bon	Moderate
34	Gynura bicolor	Asteraceae	Kopahi bon	Unknown
35	Hydrocotyl sibthorpioides	Araliaceae	Horu manimuni	High
36	Hyptis suaveolensis	Lamiaceae	Tokoma tita	Unknown
37	Impatiens tripetala	Balsaminaceae	Koriya bijol	Moderate

38	Imperata cylindrica	Poaceae	Ulu bon	Moderate
39	Lantana camara	Verbenaceae	Lantana	Low
40	Laportea crenulata	Urticaceae	Surat	Low
41	Leucas aspera	Lamiaceae	Durun sak	High
42	Lygodium flexuosum	Schizaceae	Kopou Dhekiya	Unknown
43	Manihot esculenta	Euphorbiaceae	Simolu alu	Low
44	Melastoma malabathricum	Melastomaceae	Phutkola	Unknown
45	Melia azedarach	Meliaceae	Ghora neem	Moderate
46	Mezoneuron cucullatum	Caesalpiniaceae	Bagh asura	Low
47	Mikania micrantha	Asteraceae	Senehi lota	High

48	Mimosa pudica	Mimosaceae	Nilajibon, lajuki lota	Low
49	Momordica dioica	Cucurbitaceae	Bhatkerela	Low
50	Nephrolepis brownii	Nephrolepidaceae	Biholongoni	High
51	Oldenlandia corymbose	Rubiaceae	Bon jaluk	High
52	Osbeckia sp.	-	-	Unknown
53	Oxalis corniculate	Oxalidaceae	Horu tengesi	Unknown
54	Oxalis debilis	Oxalidaceae	Bor tengesi	Moderate
55	Paspalum longifolium	Poaceae	Roth ghah	Unknown
56	Paederia foetida	Rubiaceae	Bhedai lota	High
57	Parthenium hysterophorus	Asteraceae	Parthenium	Unknown
58	Paspalum conjugatum	Poaceae	Kunjo bon	Low

59	Phyllanthus niruri	Euphorbiaceae	Bon amlokhi	Unknown
60	Piper beteloid	Piperaceae	Aaoni paan	Low
61	Piper longum	Piperaceae	Pipoli	Unknown
62	Setaria pumila	Poaceae	-	Unknown
63	Saccharum spontaneum	Poaceae	Kahi bon	Unknown
64	Scoparia dulsis	Plantaginaceae	Bon dhoniya	Moderate
65	Setaria glauca	Poaceae	Hiyal nejiya bon	Unknown
66	Sida acuta	Poaceae	Hiyal nejiya bon	Unknown
67	Smilax zeylanica	Smilacaceae	Tikoni borua	Low
68	Solanum indicum	Solanaceae	Tita bhekuri	High
69	Solanum nigrum	Solanaceae	Pokmou	Low
70	Solanum torvum	Solanaceae	Hati bhekuri	Low
71	Stephania japonica	Menispermaceae	Thupuki lota	Moderate

IV. DISCUSSION

In small tea garden area,71 weed species were observed belong to 36 families. Although the Poaceae family showing with high family members but the Commelina benghalensis species of Commelinaceae family showed highest dominant behaviour in a very short period of time and appeared like a blanket on the soil surface. From the pharmacological point of moment, it has cleared that 47 weed species are using in local medicinal practices to treat different kinds of health problems amongst the local indigenous community peoples of Gharmara village. Weeds; used in the recovery of more than two health problems of indigenous community peoples are considered as high demand category. About 23.94% are belong to this category of weeds.

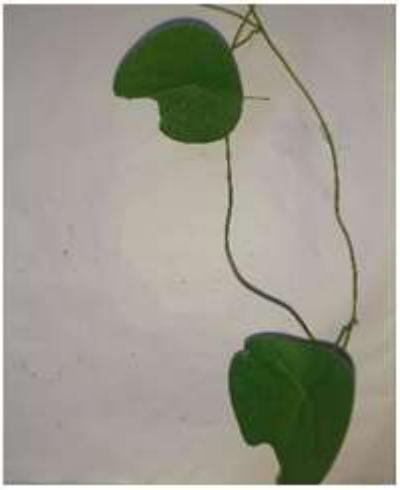

Figure 1: Stephania japonica

Figure 2: Nephrolepis brownii

Figure 3: Oldenlandia corymbose

Figure 4: Drymaria cordata

Figure 5: Phyllanthus niruri

Figure 6: Axonopus compressus

Figure 7: Nephrolepis brownii

Figure 8: Ageratum haustonianum

Figure 9: Asperagus racemosus

Figure 10: Mikania micrantha

Figure 11: Cynodont dactylon

Figure 12: Alternanthera sessilis

Figure 13: Solanum indicum

Figure 14: Impatiens tripetala

Figure 15: Axonopus compressus

Figure 16: Scoparia dulsis

V. CONCLUSION

Weeds are generally considered as unnecessary plants by tea growers. So, these are neglected but these have some unique medicinal properties too. Some weeds are rich source of plant secondary metabolites so this study will be able to reflect the concept of unnecessary plants to vital human health. However, there is a need of in-depth phytochemical research to explore the potentiality of weed flora.

Conflicts

No conflict of interest to be disclosed.

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