

## FLORISTIC DIVERSITY OF GREATER SUALKUCHI AREA UNDER KAMRUP DISTRICT OF ASSAM

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### **ABSTRACT**

An investigation was carried out during the year 2013 - 2014 in sualkuchi area of district Kamrup, Assam to evaluate the present status of angiospermic plant diversity of the area. During the period of survey a total 313 numbers of angiospermic plant species belonging to 236 genera of 94 families were recorded. Out of them 255 species are Dicotyledons under 73 families and 58 species are from Monocotyledons under 21 families were recorded. The findings of this study are expected to provide a baseline information on plant biodiversity of the area.

Key words: Sualkuchi area, Angiospermic plant diversity.

### **INTRODUCTION:**

Assam is a highly humid tropical region with heterogenic physiography

bears a separate identity phytogeographically with a number of types of Plant communities. This is due to its varied climatic conditions (Rainfall - ranging from 850 mm. To 2500 mm per annum, Temperature - ranging from 5° to 38° Celsius and Relative Humidity varied from 73 % to 95 % annually). Assam may rightly be called as the Floristic Gateway of India for its richness of vegetable wealth and diversity of Vegetation and Flora. The major type of plant communities can be grouped under Moist Evergreen Forest, Moist Semi-evergreen, Moist and Dry Deciduous Forest, Hydrophytes in vast stretches of Wetlands (Riparian belt, Swamps and Marshes), Bamboo brakes, Degraded or Scrublands, Grasslands and Savannah (both wet and dry) in alluvial plains.

The richness of plant diversity attracted the attention of a number of Botanist from the earlier periods. French Buchanan pioneered the botanical collection around Guwahati in 1808-1809. Other contributors were Hooker (1872 - 1897), Kanjilal *etal* (1934 - 1940), Rowntree (1954), Rajkhowa (1961) etc. J.D. Hooker's "Flora of British India" and the first regional flora, "Flora of Assam" by Kanjilal and his colleagues had focused the floristic composition of this region. Some of the floristic studies of Assam are the outcome of Ph.D. works viz. "Angiosperms of Kamrup District" (Barua, 1992), "Systemic studies on the "Dicotyledonous plants of Lakhimpur District" (Singh 1993), "Herbaceous plants of Karbi- Anglong District" (Sarkar, 1993), *etc.* In the recent periods notable contributions were made by Chowdhury (1993, 1998, 2005), Nath (2014), Bhattacharjee *etal.* (2014) etc.

#### **STUDY AREA:**

Sualkuchi is a planned village situated on the north bank of the river Brahmaputra, about 35 km from Guwahati of Kamrup District, Assam. There are large numbers of cottage handloom industries for which it is also known as the "Manchester of Assam". Sualkuchi is located at 6.17°N latitude and 91.57°E longitude and 33 m altitude. The greater Sualkuchi

covers a total area of 9.37 square kilometres. On the east side of Sualkuchi lies Lankas, Kaibartapara and Ananta hill; on the west side lies Bagheswari and Gobinda hill and on the north side Gondhamadan Prbatmala and the great Brahmaputra covers the south side of Sualkuchi area.

The hilly areas and Brahmaputra river bank areas have a rich plant diversity including many medicinal plants. The flora of this area is not explored earlier therefore there is an urgent need for the systematic enumeration, authentic identification and documentation of the flora of the area. Present paper deals with the angiospermic floristic diversity of the Sualkuchi area in Kamrup district of Assam.

#### **MATERIALS AND METHODS:**

The present investigation is the result of extensive field survey in Sualkuchi and its surrounding areas covering the different vegetation types (during 2013 – 2014) in all the seasons. For study of plant diversity depending upon the types of vegetation of the whole area divided roughly into – i) Hilly areas which includes Bagheswari, Bhringeswer, Gobinda, Fulbari hills ii) the bank of Brahmaputra river and iii) wet lands – includes the wet lands of SBMS College wetland, road side wet lands up to Bansar areas iv) Grass lands – include road-side areas, bank of Brahmaputra river, SBMS Col-

lege campus etc. Each area was randomly surveyed for the floristic elements covering all strata of the vegetation.

The plants were collected mainly in their flowering and fruiting stages and preserved as dried herbarium specimen using standard herbarium techniques (Jain and Rao, 1977). Identifications were done following *Flora of Assam* (Kanjal et al., 1934 – 1940; Bor, 1940), *Flora of British India*, (Hooker, 1872-1897) and comparing the herbaria of Department of Botany Gauhati University. For the up to date nomenclature [www.theplantlist.org](http://www.theplantlist.org) and Plant Diversity of Assam (Barua and Ahmed, 2014) has been consulted.

#### **RESULT AND DISCUSSION:**

Results in the following table indicate the floristic analysis of Sualkuchi area. A total of 313 species of plants belonging to 94 families and 236 genera of angiospermic plants have been recorded from the study area. Out of which 255 species are dicot. and 58 are monocot plants. Six most dominating families were Asteraceae, Caesalpiniaceae, Poaceae, Papilionaceae, Cucurbitaceae, Euphorbiaceae. Out of the total plant species 76 are trees, 59 are shrubs, 141 species are herbs and 27 species are climbers.

The beauty of the river bank area of Sualkuchi is enriched with the glooms of many trees like *Cassia fistula*, *Bombux ceiba*,

*Samanea saman*, *Bauhinia purpurea*, *Caesalpinia pulcherrima*, *Delonix regia*, *Butea monosperma*, *Erythrina indica* etc.

Other dominating plants of river bank areas are *Calotropis gigantea*, *Ricinus communis*, *Laportea crenulata*, different species of *Ficus*, *Cassia* ., *Solanum* etc.

The wet lands of Sualkuchi are also rich with different types of aquatic vegetations like *Hydrilla verticillata*, *Enhydra fluctuans* *Echbornia crassipes*, *Monocharia hastate*, *Nymphaea nouchali*, *N. rubra* etc,

Notable medicinal plants blooms in these areas are *Dillenia indica*, *Phyllanthus ambelica*, *Terminalia arjuna*, *T. chebula*, *Averrhoa carambola*, *Aegle mormelos*, *Mimusops elengi*, *Azadirachta indica*, *Cassia fistula*, *Vitex negundo*, *Sida rhombifolia*, *Urena lobata*, *Cassia alata*, *Costus speciosus*, *Clerodendrum colebrookianum*, *Lawsonia inermis*, *Paederia foetida*, *Asparagus recemosus*, *Piper longum*, *Oxalis corniculata*, *Mimosa pudica*, *Cassia tora*, *Mucuna pruriens*, *Cissus quadrangularis*, *Enhydra fluctuans*, *Tabernaemontana divericata*, *Datura stramonium*, *Ocimum sanctum*, *Euphorbia hirta*, *Centela asiatica*, *Hourttuyania cordata*, *Polygonum microcephalum*, *Chenopodium album*, *Andrographis paniculata*, *Bacopa monnieri*, *Solanum ferox*, *Nicotiana tabacum*, *Calotropis gigantea*, *Bryophyllum pinntum*, *Cynodon dactylon* etc.

**Table: Floristic analysis of Sualkuchi Area of Kamrup, District Assam.**

S . No.	Family	Scientific Name	Local Name	Type
1	Dilleniaceae	<i>Dillenia indica</i> L.	Ou tenga	Tree
2	Magnoliaceae	<i>Michelia champaca</i> L.	Titasapa	Tree
3	Annonaceae	<i>Annona reticulate</i> L.	Mewa	Tree
4	-do-	<i>A. squamosa</i> L.	Ata-phal	Tree
5	-do-	<i>Polyalthia longifolia</i> (Sonn.) Thw.	Debadaru	Tree
6	Menispermaceae	<i>Tinospora cordifolia</i> (Willd) Miers	Sagunilata	Climber
7	Nymphaeaceae	<i>Euryale ferox</i> Sailisb.	Makhana	Aquatic herb
8	-do-	<i>Nymphaea nouchali</i> Burm.f.	Baga-bhet	Aquatic herb
9	-do-	<i>N. rubra</i> Roxb. ex. Andrews	Ranga-bhet	Aquatic herb
10	Nelumbonaceae	<i>Nelumbo nucifera</i> Gaertn	Padum	Aquatic herb
11	Papaveraceae	<i>Argemone maxicana</i> L.	Sialkata	Herb
12	Brassicaceae	<i>Brassica campestris</i> L.	Sariah	Herb
13	-do-	<i>B. Juncea</i> (L.) Czern.	Lai-sak	Herb
14	-do-	<i>B. nigra</i> (L.) Koch	Kala sariah	Herb
15	-do-	<i>B. oleracea</i> L. var. <i>botrytis</i> L.	Phul-kabi	Herb
16	-do-	<i>B. oleracea</i> L. var. <i>capitata</i> L.	Bandha-kabi	Climber
17	-do-	<i>B. oleracea</i> L. var. <i>gongylodes</i> L.	Ol-kabi	Herb
18	-do-	<i>B. rapa</i> L.	Chalgom	Herb
19	-do-	<i>Nasturtium indicum</i> (L.) DC.	Ban-sariah	Herb
20	Capparaceae	<i>Stixis scandens</i> Lour	Madhabi-lata	Climber
21	Cleomaceae	<i>Cleome burmanni</i> Wight & Arn.	Bhutmala	Herb
22	-do-	<i>C. gynandra</i> L.	Bhutmala	Herb
23	-do-	<i>C. viscosa</i> L.	Bhutmala	Herb
24	Flacourtiaceae	<i>Flacourtia jangomas</i> (Lour) Raeusch	Paniol	Tree
25	Portulacaceae	<i>Protulaca grandiflora</i> Hook	Na-baji-phul	Herb
26	-do-	<i>P. oleracea</i> L.	Malbhog-sak	Herb
27	Tamaricaceae	<i>Tamarix dioica</i> Roxb.	Jhau	Shrub
28	Dipterocarpaceae	<i>Shorea robusta</i> Gaertn.	Sal	Timber-tree
30	Malvaceae	<i>Abelmoschus esculantus</i> (L.) Moench	Vendi	Under-shrub

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31	-do-	<i>Abutilon indicum</i> L. Sweet	Japa	Under-shrub
32	-do-	<i>Gossypium barbedense</i> L.	Kapah	Shrub
33	-do-	<i>Hibiscus rosa-sinensis</i> L.	Rkta-joba	Shrub
34	-do-	<i>Sida cordifolia</i> L.	Son-barial	Herb
35	-do-	<i>S. rhombifolia</i> L.	Barial	Herb
36	-do-	<i>Urena lobata</i> L.	Sonbarial	Under-shrub
37	Bombacaceae	<i>Bombux ceiba</i> L.	Simalu	Tree
38	Sterculiaceae	<i>Sterculea villosa</i> Roxb.	Odal	Tree
39	Tilliaceae	<i>Corchorus capsularis</i> L.	Marapat	Shrub
40	-do-	<i>Triumfetta rhomboidea</i> Jacq.	Ban-agara	Shrub
41	Elaeocarpaceae	<i>Elaeocarpus floribundus</i> Blume	Jalpai	Tree
42	Oxalidaceae	<i>Oxalis corniculata</i> L.	Tengesi	Herb
43	-do-	<i>O. debilis</i> var. <i>Corymbosa</i> (DC.) Lour	Bor-tengeshi	Herb
44	Averrhoaceae	<i>Averrhoa carambola</i> L.	Kardoi	Tree
45	Rutaceae	<i>Aegle mormelos</i> (L.) Correa	Bel	Tree
46	-do-	<i>Citrus aurantifolia</i> (Cristem) Swing	Gol-nemu	Shrub
47	-do-	<i>C. maxima</i> (Burn.) Osbeck	Rabab-tenga	Tree
48	-do-	<i>C. limon</i> (L.) Burn.f.	Nemu	Shrub
49	-do-	<i>Murraya Koenigii</i> (L.) Spreng	Narasingh	Tree
50	-do-	<i>M. paniculata</i> (L.) Jack	Kamini	Shrub
51	Maliaceae	<i>Azadirachta indica</i> A. Juss.	Maha-neem	Tree
52	-do-	<i>Malia azedarach</i> L.	Ghora-neem	Tree
53	-do-	<i>Toona ciliate</i> M. Roem	Poma	Tree
54	Rhamnaceae	<i>Ziziphus mauritiana</i> Lam.	Bagari	Tree
55	Vitaceae	<i>Cissus quadrangularis</i> L.	Harjora-lata	Climber
56	Sapindaceae	<i>Litchi Chinensis</i> Sonn.	Lesu	Tree
57	Anacardiaceae	<i>Mangifera indica</i> L.	Aam	Tree
58	-do-	<i>Spondias pinnata</i> (L.f.) Kurz.	Amara	Tree
59	Moringaceae	<i>Moringa oleifera</i> Lam.	Sajina	Tree
60	Mimosaceae	<i>Acacia auriculiformis</i> Cunn ex Benth.	Acacia	Tree
61	-do-	<i>A. farnesiana</i> (L.) Willd.	Tarua-kadam	Shrub

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62	-do-	<i>Albizzia procera</i> (Roxb.) Benth	Karoi	Tree
63	-do-	<i>Mimosa himalayana</i> Gamble	Lajuki-lata	Herb
64	-do-	<i>M. pudica</i> L.	Lajuki-ban	Herb
65	-do-	<i>Samanea saman</i> (Jacq.) Merr.	Siris	Tree
66	Caesalpiniaceae	<i>Bauhinia racemosa</i> Lam.	Kanchan	Tree
67	-do-	<i>B. purpurea</i> L.	R a n g a - kanchan	Tree
68	-do-	<i>B. variegata</i> L.	Baga-kanchan	Tree
69	-do-	<i>Caesalpinia pulcherrima</i> (L.) Sw.	Radhasura	Tree
70	-do-	<i>Cassia alata</i> L.	Kharapat	Shrub
71	-do-	<i>C. fistula</i> L.	Sonaru	Tree
72	-do-	<i>C. hirsuta</i> L.	Madelua	Shrub
73	-do-	<i>C. occidentalis</i> L.	Madelua	Shrub
74	-do-	<i>C. siamea</i> L.		Tree
75	-do-	<i>C. sophera</i> L.	Madelua	Shrub
76	-do-	<i>C. tora</i> L.	Madelua	Herb
77	-do-	<i>Delonix regia</i> (Hook.) Raf.	Krishnasura	Tree
78	-do-	<i>Saraca asoca</i> (Roxb.) Willd.	Asok	Tree
79	-do-	<i>Tamarindus indica</i> L.	Tateli	Tree
80	Papilionaceae	<i>Butea monosperma</i> (Lam.) Taub.	Polash	Tree
81	-do-	<i>Cicer arietinum</i> L.	Boot	Herb
82	-do-	<i>Clitoria ternatea</i> L.	Aparajita	Climber
83	-do-	<i>Cajanus cajan</i> (L.) Huth.	Arahar	Shrub
84	-do-	<i>Crotalaria juncea</i> L.	Junjuna-ban	Under-shrub
85	-do-	<i>C. pallida</i> Aiton.	Ghantakarna	Herb
86	-do-	<i>Dalbergia sissoo</i> DC.	Sisu	Tree
87	-do-	<i>Derris indica</i> (Lam.) Bennet	Karas	Tree
88	-do-	<i>Erythrina stricta</i> Roxb.	Modar	Tree
89	-do-	<i>Flemingia strobilifera</i> (L.) Br.	Makhiyoti	Shrub
90	-do-	<i>Mucuna pruriens</i> (L.) DC	Bandarkekoa	Climber
91	-do-	<i>Tephrosia candida</i> (Roxb.) D.C.	Teli-kadam	Shrub
92	-do-	<i>T. purpurea</i> (L.) Pers.	Ban-nil	Herb
93	Rosaceae	<i>Rosa alba</i> L.	Baga-golap	Shrub

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94	-do-	<i>R. indica</i> L.	Golap-phul	Shrub
95	-do-	<i>R. multiflora</i> Thunb.	Lata-golap	Shrub
96	Crassulaceae	<i>Bryophyllum pinntum</i> (Lam.) Oken.	Pategaja	Herb
97	Combretaceae	<i>Quisqualis indica</i> L.	Madhabi-lata	Climber
99	-do-	<i>Terminalia arjuna</i> (DC) W.&A.	Arjuna	Tree
100	-do-	<i>T. bellirica</i> (Gaertn) Roxb.	Bhomora	Tree
101	-do-	<i>T. chebula</i> Retz.	Silikha	Tree
102	Myrtaceae	<i>Callistemon citrinus</i> (Curtis) Skeels	Bottle-brash	Tree
103	-do-	<i>Eucalyptus maculata</i> Hook.	Eucalyptus	Tree
104	-do-	<i>Psidium guajava</i> L. Tree	Mdhuri-aam	Tree
105	-do-	<i>Syzygium cumini</i> (L.)Skeels	Kala-jamu	Tree
106	Melastomaceae	<i>Melastoma malabathricum</i> L.	Phutuka	Shrub
107	-do-	<i>Osbeckia rostrata</i> D. Don.	Phuutuka	Shrub
108	Lythraceae	<i>Lagerstroemia purviflora</i> Roxb.	<i>Sidha</i>	Tree
109	-do-	<i>L. speciosa</i> (L.) Pers.	Ajar	Tree
110	-do-	<i>Lawsonia inermis</i> L.	Jetuka	Shrub
111	Crypteroniaceae	<i>Dunbanga grandiflora</i> Roxb.) Walp	Khokan	Tree
112	Punicaceae	<i>Punica granatum</i> L.	Dalim	Tree
113	Onagraceae	<i>Jussiaea repens</i> L.	Pani-khutura	Herb
114	-do-	<i>Ludwigia adscendens</i> (L.) Hara	Saru-halas	Herb
115	Trapaceae	<i>Trapa natans</i> L.	Pani-singari	Aquatic-herb
116	Caricaceae	<i>Carica papaya</i> L.	Amita	Tree
117	Cucurbitaceae	<i>Benincasa hispida</i> (Thumb.) Cogn.	Chal-komora	Climber
118	-do-	<i>Citrullus colocynthis</i> (L.) Schrad.	Kuwa-vaturi	Herb
119	-do-	<i>Momordica charantia</i> L.	Tita-kerela	Climber
120	-do-	<i>M. dioica</i> Roxb. ex. Willd.	Bhat-kerela	Climber
121	-do-	<i>Cucumis melo</i> L.	Bangi	Climber
122	-do-	<i>C. sativus</i> L.	Tiyah	Climber
123	-do-	<i>Cucurbita maxima</i> Duch	Mitha-lao	Climber
124	-do-	<i>C. pepo</i> L.	Komora	Climber
125	-do-	<i>Lagenaria siceraria</i> (Monila) Standl.	Pani-lao	Climber
126	-do-	<i>Luffa acutangula</i> (L.) Roxb.	Jika	Climber
127	-do-	<i>L. cylindrica</i> (L.) Roem.	Bhol	Climber

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128	-do-	<i>Trichosanthes cucumerina</i> L.	Nileji	Climber
129	Cactaceae	<i>Opuntia dillenii</i> (Ker Gawl.) Haw.	Sagar-phena	Shrub
130	-do-	<i>Cereus repandus</i> (L.) Mill.	Siju	Herb
131	Apiaceae	<i>Centela asiatica</i> (L.) Urb.	Manimuni	Herb
132	-do-	<i>Coriandrum sativum</i> L.	Dhania	Herb
133	-do-	<i>Daucas carota</i> L.	Gajar	Herb
134	-do-	<i>Eryngium foetidum</i> L.	Man-dhania	Herb
135	-do-	<i>Hydrocotyle sibthorpioides</i> Lam.	S a r u - manimuni	Herb
136	Rubiaceae	<i>Ixora coccinea</i> L.	Rangan	Shrub
137	-do-	<i>Paederia foetida</i> L.	Bhebeli-lata	Climber
138	-do-	<i>Gardenia florida</i> L.	Tagar	Shrub
139	-do-	<i>Oldenlandia corymbosa</i> L.	Sarpajeva-ban	Herb
140	Asteraceae	<i>Ageratum conyzoides</i> L.	Ganheli-ban	Herb
141	-do-	<i>Chromolaena odorata</i> (L.) Voigt	Jarmani ban	Herb
142	-do-	<i>Chrysanthemum coronarium</i> L.	Indramalati	Herb
143	-do-	<i>Eclipta prostrate</i> (L.) L.	Kehraj	Herb
144	-do-	<i>Elephantopus scaber</i> L.	Hati-khoj	Herb
145	-do-	<i>Emilia soncifolia</i> (L.) DC.	Kurkuchi	Herb
146	-do-	<i>Enhydra fluctuans</i> DC.	Helachi	Herb
147	-do-	<i>Helianthus annuus</i> L.	Beliphul	Herb
148	-do-	<i>Mickania micrantha</i> Kunth.	Jarmani-lata	Climber
149	-do-	<i>Parthenium hysterophorus</i> L.	Parthenium	Herb
150	-do-	<i>Spilanthus paniculata</i> DC	Mahavingaraj	Herb
151	-do-	<i>Tridax procumbens</i> L. (L.)		Herb
152	-do-	<i>Vernonia cinerea</i> (L.) Lees.		Herb
153	-do-	<i>Xanthium strumarium</i> L.	Agora	Herb
154	-do-	<i>Wdellia calendulacea</i> Lees.	Vingaraj	Herb
155	Sapotaceae	<i>Mimusops elengi</i> L.	Bakul	Tree
156	Oleaceae	<i>Jasminum laurifolium</i> Roxb.	Gutimalati	Shrub
157	-do-	<i>Nyctanthus arbour-tristis</i> L.	Sewali	Tree
158	Apocynaceae	<i>Allamanda cathartica</i> L.	Ghanta-phul	Shrub
159	-do-	<i>Alstonia scholaris</i> (L.) R. Br.	Chatiyana	Tree