



Study of the phyto-diversity of Birendra Multiple Campus

Manoj K. L. Das Ph. D*

E-mail: manojdas068@gmail.com

Abstract

The present study was assess the vascular flora of the Birendra M. Campus, Chitwan, Nepal in various seasons. The campus area had many wild and cultivated plants which were disturbed by cattle grazing over exploitation and uses of herbicides. 115 plant species belonging to 51 families were reported from the campus premises. There were 66 species were cultivated and numbers of wild species were 49. There were 63 herbs 18 shrubs 23 trees and 8 climbers. 48 annual, 2 biennial and 65 perennial plants were reported.

Key word: Species, flora, families, wild, cultivated, annual perennial

Introduction:

Birendra multiple campus is a leading institute in the Nepal to invest for trained skilled manpower for future. (Das, 2017). This college is located in the tropical zone of inner Terai region of Nepal. Geographically, campus is situated in nearly central part of Nepal lies between Chure and Mahabharat range in Chitwan and 415 meter in altitude. The Chitwan is located between latitude of 83° 55' w to 84° 48' and longitude 27° 21" to 27° 46" N. The vegetation of Chitwan is described in relation to its bio-chimatic zones, edaphic factors, topographic factors and catastrophic factor (Dangol, 2008) Birendra multiple Campus has a lot of floral diversity having wild plants, (Das, 2015). Most of the plants have medicinal value. (Dangol, 2008. Plants are epiphytes and hydrophytes, xerophytes and mesophyte. Birendra Multiple Campus has always play a pivotal role for the betterment of environment along with the intention to guide the researchers in our future projects. (Das, 2017)

The present paper deals with the enumeration habitat, habit and families of available flora in various seasons

Material and methods

The flora of Birendra Campus area was carefully enumerated in summer, rainy and winter seasons. The current study is based on primary and secondary data. The primary data were collected from field study direct observation, informal discussion and secondary data were collected from relevant literature and different website. Plants were identified by using herbarium, books and different websites. The application of

* Dr. Das is Associate Professor in Botany at Birendra Multiple Campus (Tribhuvan University)

plant photographs was important for the identification of plants (Pl@Net)

Result and discussion

The study area had abundant floral diversity of 115 floral species are reported from Birendra Campus premises. Most of the flora was cultivated in kitchen gardens of staff quarters. The wild flora was also reported total 51 families of tracheophytes were reported from the study area.

Growing Pattern of Plants

Among reported its plant species, 48 plants were annual and 65 plants species were perennial. Only two plant species are biennial.

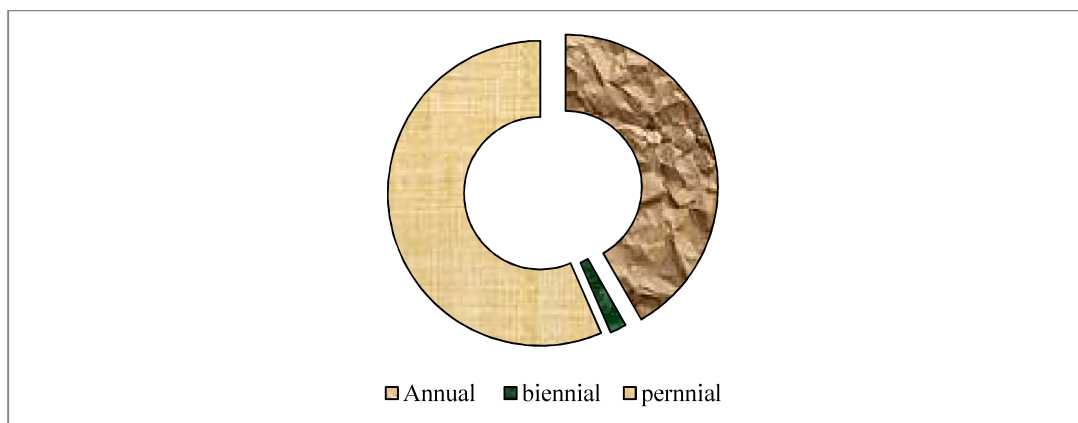


Fig: Growing pattern of plants

Habit:

Out of 115 plant species documented, 63 plant species were herbs, 18 plant species were shrubs, 32 plant species are trees, 8 plant species are climbers.

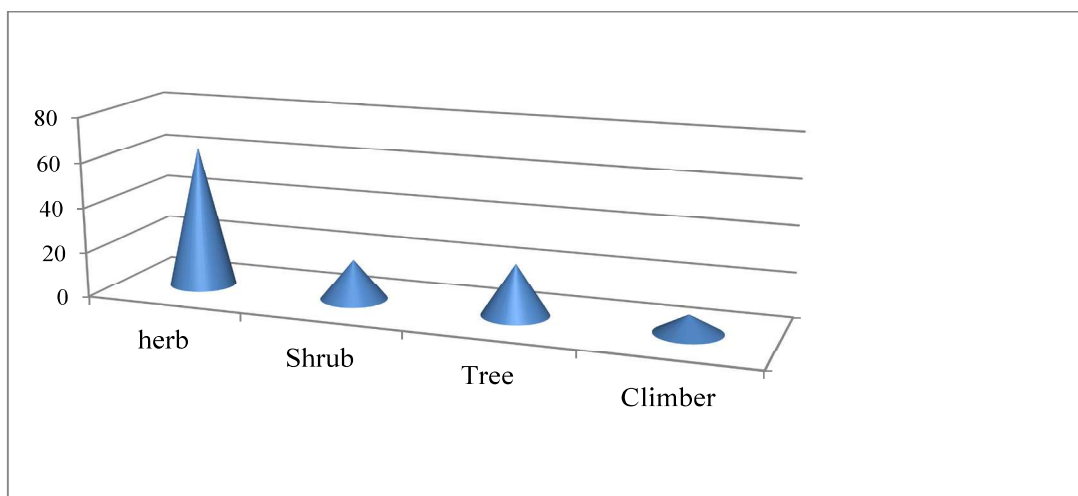


Fig: Habit of plants

Categorization of plants

All documented plants species were belonged to 51 families which could be divided as:

Major families -

Poaceae, Astraceae Cyperaceae Fabaceae and solanaceae,

Moderate families -

Amaranthacea, Moraceae, Brassicaceae, Cucurbitaceae, Rutaceae, Moraceae, Euphorbiaceae, Malvaceae,

Minor families -

Achyranthaceae, Annonaceae, Apiaceae, Apocyanaceae Araceae, Araucariaceae, Areceae, Asclepidaceae, Liliaceae Cannabiaceae, Cariaceae, Caryophyllaceae, Chenopodiaceae Clusiaceae, Commelinaceae, Cupressaceae, Cycadaceae, Hydrocharitaceae, Lamiaceae, Meliaceae, Moringaceae, Musaceae, Myrtaceae, Nyctaginaceae, Oxalidaceae, Pandanaceae, Paulowniaceae, Pinaceae, Planaginaceae, Polypodiaceae, Pteridaceae, Rhamnaceae, Rosaceae, Rubiaceae, Sapindaceae, Umbelliferae, Verbenaceae, Zingerbiaceae

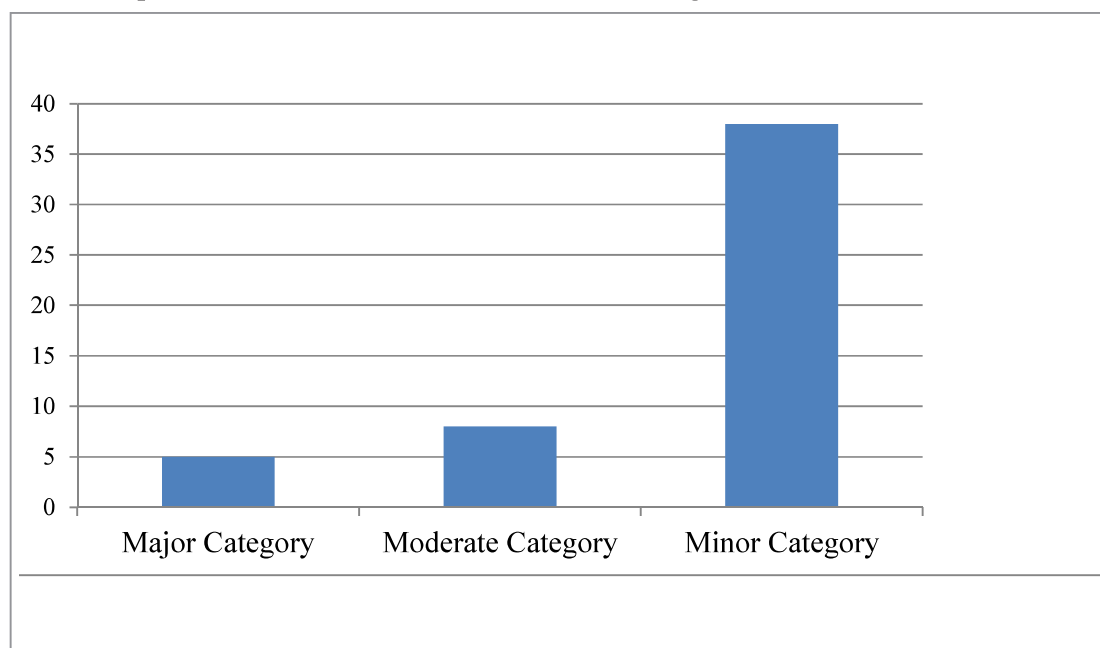


Fig: Categorization of available families

The major families had 5 families, the Asteraceae family was represented by 12 plant species 2nd largest family was poaceae having 9 plant species. The moderate category had 8 families while minor category had 38 families.

Status

Out of 115 documented plant species, 66 species were cultivated for food purpose. 49 species were recorded as wild flora.

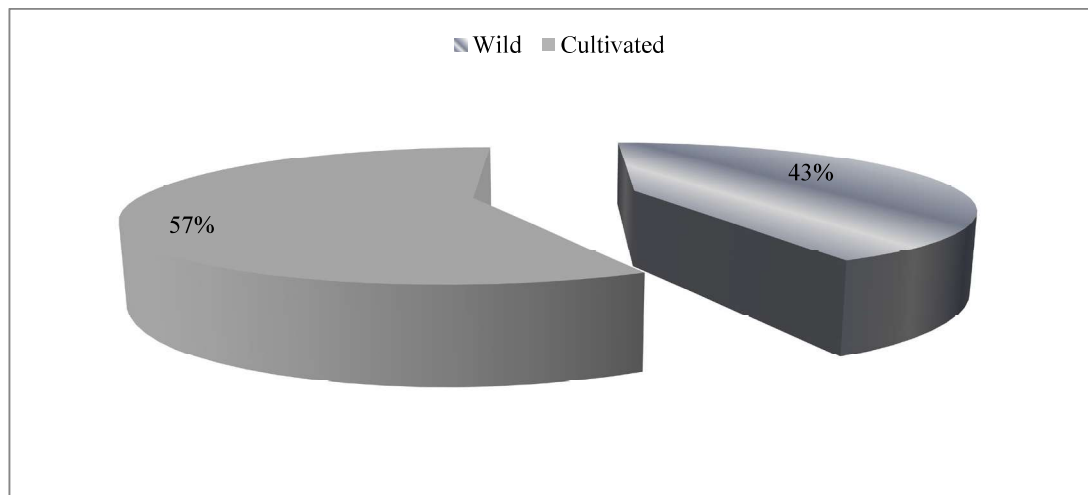


Fig: Status of flora

Conclusion:

Above study contributes to the documentation of all flora of Birendra M. Campus. Out of 51 plant families, poaceae, Asteraceae, Fabaceae and Solanaceae are dominant families. This campus has cultivated as well as wild plants. *Imperata cylindrica*, *Oxalis corniculata* and *Drimaria diandra* are the dominant wild flora. Since the weeds of this campus has the great significance for the students and research scholars. The present paper plays important role in practical of plant taxonomy and ecology.

References

- Das M.K. (2015), Enumeration of wild flora of Birendra M. Campus, Vivek Vol-10
Das M.K (2017) Wild edible plants available in the markets of Chitwan, BMC Journal
p.p. 10-15 ISSN 2594-3421
Danogl D.R. (2008): Traditional uses of plants of common land habitat in Chitwan
Nepal, J. Inst. Agri, Anim. Science 29:78-81
Pl@nt Net identify; plantnet.org

Table: 1. Enumeration of plants in Birendra M. Campus

S.N.	Scientific Name	Vernacular Name	Family	Habits	Growing Pattern
1	<i>Achyranthus aspera L</i>	Datiwan	Achyrantheaceae	Herb	Annual
2	<i>Amaranthus spinosus L</i>	Lunde kanda	Amaranthaceae	Herb	Annual
3	<i>Celosia cristata L</i>	Cock's comb	Amaranthaceae	Herb	Annual
4	<i>Amaranthus viridis L</i>	Late sag	Amaranthaceae	Herb	Annual
5	<i>Polyalthia longifolia sonn.</i>	Lahare ashoka	Annonaceae	Shrub	Perennial
6	<i>Foeniculum Vulgare Mill</i>	Saunf	Apiaceae	Herb	Annual
7	<i>Coriandrum sativum L</i>	Dhaniya	Apiaceae	Herb	Annual
8	<i>Catharanthus roseus L</i>	Sadabahar	Apocynaceae	Herb	Perennial
9	<i>Colocasia esculenta L</i>	Black taro	Araceae	Herb	Perennial
10	<i>Pothos aureum L</i>	Money plant	Araceae	Climber	Perennial
11	<i>Caladium bicolor Vent</i>	Angel wings	Araceae	Herb	Annual
12	<i>Araucaria columnaris Hook</i>	Christmas tree	Araucariaceae	Tree	perennial
13	<i>Araucaria araucana L</i>	Monkey puzzle tree	Araucariaceae	Tree	Perennial
14	<i>Caryota urens L</i>	Solitary fishtail palm	Areceae	Tree	Perennial
15	<i>Areca catechu L</i>	Supadi	Arecaceae	Tree	Perennial
16	<i>Calotropis giganteal L</i>	Anak	Asclepiadaceae	Shrub	Perennial
17	<i>Aloe vera L</i>	Ghiukumari	Liliaceae	Herb	Perennial
18	<i>Ageratum houstonianum Mill</i>	Gande jhar (Seto)	Asteraceae	Shrub	Annual
19	<i>Tridax procumbens L</i>	Ghamra	Asteraceae	Herb	Annual
20	<i>Parthenium hysterophorus L</i>	Pati	Asteraceae	Herb	Annual
21	<i>Mikania micrantha Kunth</i>	Michaha jhar	Asteraceae	Climber	Annual
22	<i>Tagetes patula L</i>	Sayepatri	Asteraceae	Herb	Annual
23	<i>Zinnia elegans L</i>	Parbatiful	Asteraceae	Herb	Annual
24	<i>Dahlia hybrida Cav</i>	Lahure ful	Asteraceae	Herb	Perennial
25	<i>Artemisia vulgaris L</i>	Mugwort	Asteraceae	Herb	Perennial
26	<i>Brassica campstris L</i>	Field mustard	Brassicaceae	Herb	Biennial
27	<i>Raphanus sativus L</i>	Mula	Brassicaceae	Herb	Annual
28	<i>Brassica aleraceaVar capitata L</i>	Cabbage	Brassicaceae	Herb	Annual
29	<i>Brassica oleraceaVar botrytis L</i>	Cauliflower	Brassicaceae	Herb	Annual
30	<i>Cannabis sativa L</i>	Ganja	Cannabiaceae	Herb	Annual
31	<i>Carica papaya L</i>	Papaya	Caricaceae	Shrub	Perennial
32	<i>Drymaria diandra Blum</i>	Abhijalo	Caryophyllaceae	Climb	Annual
33	<i>Chenopodium album L</i>	Bethe	Chenopodiaceae	Herb	Annual
34	<i>Garcinia mangostena L</i>	Mangosteen	Clusiaceae	Shrub	Perennial
35	<i>Tradescantia pallida L</i>	Purple heart	Commelinaeae	Herb	Perennial
36	<i>Ageratum conyjiodes L</i>	Gandhe jhar (Nilo)	Asteraceae	Herb	Annual
37	<i>Bidens pilosa L</i>	Kalo kuro	Asteraceae	Herb	Annual

38	<i>Artemisia japonica L</i>	Titepati	Asteraceae	Shrub	Perennial
39	<i>Xanthium stamarium L</i>	Bhedo kuro	Asteraceae	Herb	Annual
40	<i>Bryophyllum pinnatum Lam</i>	Pattharchatta	Crassulaceae	Herb	Perennial
41	<i>Coccinea grandis Wight</i>	Gol kakri	Cucurbitaceae	Climber	Annual
42	<i>Coccinia cordifolia L</i>	Tilkor	Cucurbitaceae	Herb	Annual
43	<i>Curbita pepo L</i>	Pumpkin	Cucurbitaceae	Climber	Annual
44	<i>Momordica charania L</i>	Karela	Cucurbitaceae	Climber	Annual
45	<i>Tuja occidentalis L</i>	Dhupi	Cupressaceae	Shrub	Perennial
46	<i>Cycas revolute Buch</i>	Sago palm	Cycadaceae	Shrub	Perennial
47	<i>Cyperus rotundus L</i>	Mothe	Cyperaceae	Herb	Perennial
48	<i>Fimbristylis dichotomal L</i>	Mothe	Cyperaceae	Herb	Annual
49	<i>Fimbristylis milicacea L</i>	Mothe	Cyperaceae	Herb	Annual
50	<i>Kylinga brevifolia Roth</i>	Mothe	Cyperaceae	Herb	Perennial
51	<i>Euphorbia millii Des</i>	Crist plant	Euphorbiaceae	Herb	Perennial
52	<i>Euphorbia hirta L</i>	Dudhe jhar	Euphorbiaceae	Herb	Perennial
53	<i>Euphorbia royleana Boss</i>	Siudii	Euphorbiaceae	Prickly shrub	Perennial
54	<i>Phyllanthus urinaria. L</i>	Bhuiamla	Euphorbiaceae	Herb	Perennial
55	<i>Momosa pudica Roth</i>	Lazzawoti jhar	Fabaceae	Herb	Perennial
56	<i>Soraca asoca L</i>	Ashoka tree	Fabaceae	Tree	Perennial
57	<i>Dolichos lablab Raf</i>	Tatey simii	Fabaceae	Climber	Annual
58	<i>Delonix regia L</i>	Gulmohar	Fabaceae	Tree	Perennial
59	<i>Cassia fistula L</i>	Rajbriksha	Fabaceae	Tree	Perennial
60	<i>Vicia faba var.equina L</i>	Bakulla	Fabaceae	Herb	Annual
61	<i>Phaseolus vulgaris L</i>	Kidney been	Fabaceae	Climber	Annual
62	<i>Vigna sinensis L</i>	Bodi	Fabaceae	Herb	Annual
63	<i>Demostachys biponnata L</i>	Kush	Graminea	Herb	Perennial
64	<i>Hydrilla verticillata Royale</i>	Hydrilla	Hydrocharitaceae	Aquatic herb	Annual
65	<i>Ocimum sanctum L</i>	Tulsi	Lamiaceae	Herb	Perennial
66	<i>Tectona grandis L</i>	Teak	Lamiaceae	Tree	Perennial
67	<i>Cinnamomum camphora L</i>	Kapur	Lauraceae	Tree	Perennial
68	<i>Lilium longiflorum Thub</i>	Lily	Liliaceae	Herb	Perennial
69	<i>Allium cepa L</i>	Onion	Liliaceae	Herb	Annual
70	<i>Abutilon indicum G. Don</i>	Atibulu	Malvaceae	Herb	Perennial
71	<i>Hibiscus rosa-sinensis L</i>	Chinese hibiscus	Malvaceae	Shrub	Perennial
72	<i>Gossypium barbandenis L</i>	Cotton	Malvaceae	Shrub	Perennial
73	<i>Abutilon hybridum L</i>	Persian mallow	Malvaceae	Herb	Perennial
74	<i>Azadirachta indica Juss</i>	Neem	Meliaceae	Tree	Perennial
75	<i>Ficus religiosa L</i>	Papal	Moraceae	Tree	Perennial

76	<i>Artocatus heterophyllus Lam</i>	Kathar	Moraceae	Tree	Perennial
77	<i>Ficus benjamina L</i>	Shami	Moraceae	Tree	Perennial
78	<i>Ficus benghalensis L</i>	Bar	Moraceae	Tree	Perennial
79	<i>Moringa oleifera Lam</i>	Drumstick tree	Moringaceae	Tree	Perennial
80	<i>Musa paradisiacal L</i>	Banana	Musaceae	Shrub	Biennial
81	<i>Syzygium cumini L</i>	Jamun	Myrtaceae	Tree	Perennial
82	<i>Mirabilis jalapa L</i>	Malati ful	Nyctginaceae	Herb	Perennial
83	<i>Oxalis corniculata L</i>	Chari amilo	Oxalidaceae	Herb	Annual
84	<i>Pandanus nepalensis Par</i>	Tarika	Pandanaceae	Shrub	Perennial
85	<i>Paulownia elongate Sie</i>	Kiri tree	Paulowniaceae	Tree	Perennial
86	<i>Pinus roxburghii Sang</i>	Sallo	Pinaceae	Tree	Perennial
87	<i>Russelia equisetiformis Cham</i>	Fountain bush	Plantaginaceae	Herb	Perennial
88	<i>Imperata cylindrical L</i>	Siru	Poaceae	Herb	Annual
89	<i>Cyanodon dactylon L</i>	Dubo	Poaceae	Herb	Perennial
90	<i>Sacharum officinarum L</i>	Ukhu	Poaceae	Herb	Perennial
91	<i>Eleusine indica L</i>	Kodo ghans	Poaceae	Herb	Annual
92	<i>Imperata cylindrica L</i>	Siru	Poaceae	Herb	Perennial
93	<i>Zea mays L</i>	Maize	Poaceae	Herb	Annual
94	<i>Axonopus compressus P</i>	Makaipate banso	Poaceae	Herb	Annual
95	<i>Cyperus compactus L</i>	Mothe	Poaceae	herb	Perennial
96	<i>Dryopteris filix-mas L</i>	Unuo	Polypodiaceae	Herb	Annual
97	<i>Pteris vittata L</i>	Chinese ladder brake	Pteridaceae	Herb	Annual
98	<i>Ziziphus jujuba L</i>	Bayar	Rhamnaceae	Shrub	Perennial
99	<i>Rosa indica</i>	Gulaf	Rosaceae	Shrub	Perennial
100	<i>Ixora coccinea L</i>	Jungle flame	Rubiaceae	Shrub	Annual
101	<i>Murraya koenigii L</i>	Kadipatta	Rutaceae	Tree	Perennial
102	<i>Citrus aurantium L</i>	Lemon	Rutaceae	Tree	Perennial
103	<i>Callistemon citritus Byne</i>	Bottle brush tree	Myrta	Tree	Perennial
104	<i>Aegle marmelus L</i>	Bael/stone apple	Rutaceae	Tree	Perennial
105	<i>Litchi chinesis L</i>	Litchi	Sapindaceae	Tree	Perennial
106	<i>Solanum xanthocarpum L</i>	Banbhanta	Solanaceae	Herb	Perennial
107	<i>Solanum nigrum L</i>	Kaligendi	Solanaceae	Herb	Annual
108	<i>Petunia hybrida Sweet</i>	Petunia	Solanaceae	Herb	Annual
109	<i>Datura stromonium L</i>	Dhaturo	Solanaceae	Herb	Annual
110	<i>Solanum melongena L</i>	Bhanta	Solanaceae	Shrub	Perennial
111	<i>Solanum tuberosum L</i>	Potato	Solanaceae	Herb	Annual
112	<i>Centella asiatica L</i>	Gholtapare	Umbelliferae	Herb	Annual
113	<i>Lantana camara L</i>	Banmasa	Verbenaceae	Shrub	Perennial
114	<i>Clerodendrum viscosum L</i>	Ghatu	Verbenaceae	Herb	Annual
115	<i>Curcuma longa L</i>	Turmeric	Zingiberaceae	Herb	perennial