

ISSN: 2467-9283



Indexing & Abstracting

Open Academic Journals Index (OAJI), InfoBase Index, Cosmos, ResearchGate, CiteFactor, Scholar Stear, JourInfo, ISRA: Journal-Impact-Factor (JIF), Root Indexing etc.

Impact Factors*

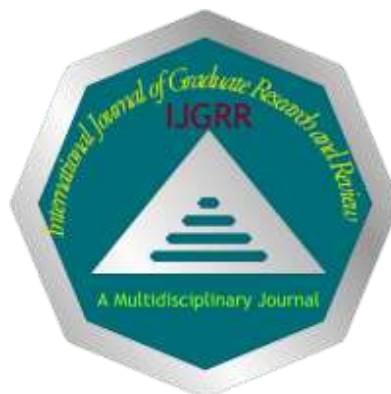
IBI factor: 3

Impact factor (OAJI): 0.101



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INTERNATIONAL JOURNAL OF GRADUATE RESEARCH AND REVIEW



Vol-3, Issue-4

November 2017

Study on Plant Distribution Pattern of Chameli Community Forest, Bhaktapur, Nepal

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Abstract

Horizontal (east, centre, west) and vertical (bottom, middle and top) distribution study of plants in Chameli Community Forest was done in 2016 in Chameli Community Forest, which is a small hill facing the North-West with an altitude of 1590 masl and lies in sub-tropical region of Nepal. It occupied an area of 13.16 ha. Herbs are more dominant in bottom, trees in middle and shrubs in top region. The east area of bottom, middle and top region had more diverse vegetation. During the study of Chameli Community Forest, a total of 152 plants (32 trees, 33 shrubs, 11 climbers, 3 epiphytes and 73 herbs) species were collected, identified preserved and listed. Among them 110 dicot species under 49 families and 91 genera; 26 monocot species under 7 families and 21 genera; 15 pteridophyte species under 10 families and 14 genera and one gymnosperm under one family and one genera were recorded. Plants were recorded under 127 genera and 153 species. The forest had 72 percentage dicot plant species followed by least percentage of epiphytes. The dominant species in the forest was *Schima wallichii* and *Rhododendron arboreum*. Therefore, the forest was *Schima-Rhododendron* forest type. Though the forest covered small area, large number of plant species were documented which showed that the forest was highly diversified.

Keywords: Plant distribution; Dominant species; Plant diversity.

Introduction

Plants are distributed in all places such as low land, midland, high land and Himalayas. The distribution of plants mainly depends upon the environmental factors such as temperature, rainfall, elevation, aspect and soil conditions. Depending upon the elevation, the vegetation is divided into Tropical forest (*Shorea robusta* forest, upto 1000m), Sub tropical forest (*Schima castanopsis* and *Pinus roxbughii*, up to 2000m including midlands and Mahabharat range), Temperate forest (Oaks, Conifers and *Rhododendron* forest up to 2000 to 3000m), Sub alpine forest (*Abies*, *Birches* and *Juniper* forest up to 3000 to 4000m, Himalayas and Inner Himalayas) and Alpine forest (alpine shrub, e.g. *Primula*, stipples and cushions up to 4000m to 5000m). This type of distribution represents the vertical distribution. Similarly, horizontal distribution of plants or vegetation represents the distribution in east, centre and west of the study area. Shrestha (1985) also studied the Distributional Analysis (Horizontal and Vertical) of plant species from Suryabinayak Forest area. Baral (1983) studied about plant distribution and soil nutrients. Pradhan and Ghimire (1994) studied the plant species distribution in relation to soil factors in Phulchowki

Hill. This study was carried out to know the vegetation distribution pattern in the area.

Materials and Methods

Study Area

The study has been done in Chameli Community Forest, Bhaktapur, sub-tropical region of Nepal (Fig. 1). It is a small hill facing the North-West with an altitude of 1590 masl with and area of 13.16 ha. There is popular temple called "Bindabasini" which lies at the centre of bottom region of the forest. There is an off-road passing through the bottom of the forest. The majority of the users in the CFUG belong to Brahmin ethnicity and others are Chhetri, Newar, Magar, Sarki, Kami, Damai and Tamang (Poudel, 2010).

Plant collection

Plants were collected from the field by the following ways (Shrestha Malla, 2013). Only the flowering twigs (branch) of plant were collected by using plant cutter. At least three plant specimens for replication were collected. Plant specimens having stem, leaves, flowers and fruits were collected. Collected fruits and any other modification were kept in a bag. Tag was tied for one of each new species of plant by numbering. Field notes were kept about specimen in field book.



Fig. 1: Map of Nepal showing study area

Plant Identification

Families of plants were identified on the basis of floral and gross morphology. Collected plant species were identified by different sources, such as Herbarium kept in Botany Department of Tri-Chandra Multiple Campus, Herbariums of National Herbarium and Plant Laboratories. Some plants were identified by ‘Flora of British India, (Vol 1-5, 1872-1890) by Hooker.

Plant distribution

For convenience of study of distribution of plants, vertically the hill region was marked as Bottom (1400m), Middle (1495m) and Top (1590m) by the help of altimeter. This division is mainly based on altitude. Similarly, horizontally, the hill region was divided into east, centre and west. The presence or absence of plant species in those nine areas were marked by ‘+’ and ‘-’ and were marked and represented in areas as mentioned in Table 1.

Table 1: Representation of whole area.

Bottom (1400m)			Middle (1495m)			Top (1590m)		
East	Centre	West	East	Centre	West	East	Centre	West

Results and Discussion

According to the vertical and horizontal distribution of the plant species the most dominant plant species in the Chameli Community forest were *Schima wallichii* and *Rhododendron arboreum* (Poudel, 2010). The dominant species found in an average in the study area were *Castanopsis indica*, *Castanopsis tribuloides*, *Pyrus pashia*, *Urtica dioca* and *Alnus nepalensis*. The plants like *Celtis australis*, *Liqustrum confusum*, *Nicotiana tabacum*, *Sida rhombifolia*, *Carex baccans*, *Curculigo orchioides* and *Osbeckia nepalensis* were found scattered in the study area (Table 2).

In an average, plants such as *Castanopsis indica*, *Castanopsis tribuloides*, *Urtioca dioca*, *Pyrus pashia* and *Alnus nepalensis* were also dominant in this forest. Similarly, plant species such as *Celtis australis*, *Liqustrum confusum*, *Nicotiana tabacum*, *Sida rhombifolia*, *Carex baccans*, *Curculigo orchioides*, *Osbeckia nepalensis* etc were found very scattered in the forest.

Plant species like *Acyranthes aspara*, *Ageratum haustonianum*, *Amaranthus blitum*, *Crassocephalum crepidiodes*, *Drimaria cordata*, *Englehardtia spicata*, *Gaultheria fragrantissima*, *Gnaphalium leuto-album*, *Pterospermum acerifolium*, *Rumex dentatus*, *Salvia officinalis*, *Coniogramme fraxinae*, *Dicranopteris lanigera*, *Equisetum arvense*, *Lycopodium japonicum* are dominant in bottom region (1400 masl) whereas plants like *Celtis australis*, *Liqustrum confusum*, *Nicotiana tabacum*, *Sida rhombifolia*, *Carex baccanas*, *Curculigo orchioides*, *Osbeckia nepalensis* are sparse in bottom region of the study area (Table 2).

Similarly, plants species like *Semicarpus anacardium*, *Bambusa vulgare*, *Paspalum distinctum*, *Castanopsis indica*, *Castanopsis tribuloides*, *Rhododendron arboreum*, *Alnus nepalensis*, *Schima wallichii* are dominant in the middle region (1495 masl) whereas *Acaranthus aspera*, *Aesthynanthus parviflorus*, *Ageratum conyzoides*, *Ageratum haustonianum*, *Ajuga macrosperma*, *Anaphalis adnata*, *Anaphalis busua*, *Artimisia vulgure*, *Gnaphalium leuto-album*, *Hedera nepalensis*, *Hedyotis scandens*, *Isodon sacropularioides*, *Ocimum barbatum*, *Osyris wightiana*, *Piper longum*, *Potentilla leschnaaltina*, *Rubus accuminatus*, *Scutellaria repens* are scattered in middle region of the study area.

Table 2: Horizontal and Vertical Distribution of plant species in Chameli Community Forest

S.N.	Scientific name of plants	Bottom of the hill			Middle of the hill			Top of the hill		
		East	Centre	West	East	Centre	West	East	Centre	West
1	<i>Acaranthes aspera</i> ,L.d.	+	+	+	+	-	-	-	-	-
2	<i>Aesthynanthus parviflorus</i> ,(D.Don)Spreng.	+	+	+	+	-	+	-	+	-
3	<i>Agave cantula</i> ,Roxb.	-	+	+	-	+	+	-	-	-
4	<i>Ageratina adenophora</i> , Soreng.	+	+	+	+	-	+	+	+	+
5	<i>Ageratum conyzoides</i> ,L.	+	+	+	-	-	-	-	-	-
6	<i>Ageratum haustonianum</i> ,Mill.	+	+	+	-	-	-	-	-	-
7	<i>Ajuga macrosperma</i> ,Wall.ex.Benth.	-	+	-	+	-	-	-	+	-
8	<i>Alnus nepalensis</i> ,D.Don.	+	+	+	+	+	+	-	-	-
9	<i>Amaranthus blitum</i> ,Linn.	+	+	+	-	-	-	-	-	-
10	<i>Anaphalis adnata</i> ,Sims.	+	-	+	-	-	+	-	-	-
11	<i>Anaphalis busua</i> ,(Buch-Ham.ex.Don)DC.	-	-	-	-	-	+	-	+	+
12	<i>Artemisia vulgare</i> ,Linn.	+	+	+	-	-	+	+	+	+
13	<i>Baenghaurium albiflora</i> ,	-	-	-	-	-	-	+	-	+
14	<i>Berberis aristata</i> ,DC.	-	-	-	+	+	+	+	+	+
15	<i>Bidens pilosa</i> ,Linn.	+	+	+	+	-	+	+	+	+
16	<i>Bidens tripartita</i> ,L.	+	+	+	+	-	+	-	-	-
17	<i>Buddleja asiatica</i> ,Lour.	+	+	+	+	-	+	-	-	-
18	<i>Butea monosperma</i> ,(Lam.)Kuntze.	-	-	-	+	-	+	-	-	-
19	<i>Camellia kissi</i> ,Wall.	-	-	-	+	+	-			
20	<i>Castanopsis indica</i> ,Sm.	+	+	+	+	+	+	-	+	+
21	<i>Castanopsis tribuloides</i> ,Roxb.	+	+	+	+	+	+	-	+	+
22	<i>Celtis australis</i> ,L.	-	+	-	+	+	-	-	-	-
23	<i>Centella asiatica</i> ,(L.)Urban.	+	-	+	-	-	-	-	-	-
24	<i>Choerospondiasaxillaris</i> ,(Roxb.)B.L.Brutt.A.W.Hill.	+	+	+	+	-	+	-	-	+
25	<i>Cirsium wallichi</i> ,DC.	+	+	+	-	-	-	+	+	+
26	<i>Cissampelas pereira</i> ,L.	+	+	+	+	-	+	+	+	+
27	<i>Cleome gynandra</i> ,L.	-	-	-	+	-	-	-	-	-
28	<i>Cleyera ochracea</i> ,Thumb.	+	+	-	+	+	-	-	+	+
29	<i>Crassocephalum crepidiodes</i> ,(Benth.)S.Moore.	+	+	+	-	-	-	-	-	-
30	<i>Crepis japonica</i> , L	+	+	+	-	-	-	+	-	-
31	<i>Cucumis callosus</i> , (Rottlb.)Coyn.	+	+	+	+	-	-	+	-	-
32	<i>Cuphea procumbens</i> .Cav.	-	-	+	+	-	+	-	+	+
33	<i>Desmodium concinuum</i> ,DC.	-	-	-	-	-	-	+	+	+
34	<i>Desmodium elegans</i> ,DC.	-	-	-	+	-	+	+	+	+
35	<i>Dioscorea bulbifera</i> .L.	+	+	+	+	+	+	-	-	-
36	<i>Drimaria cordata</i> ,Willd.	+	+	+	-	-	-	-	-	-
37	<i>Elephantopus scaber</i> , Linn.	+	+	+	-	-	-	-	-	-
38	<i>Englehardtia spicata</i> ,lech.	-	+	-	+	-	+	+	+	+
39	<i>Eriobotrya dubai</i> ,DC	-	-	-	+	+	+	+	-	-
40	<i>Eurya acuminata</i> , DC.	+	+	-	+	+	-	-	-	-
41	<i>Ficus benghalensis</i> ,L.	+	+	+	-	-	-	-	-	-
42	<i>Ficus benjamina</i> , L.	-	+	-	+	-	+	-	-	-
43	<i>Ficus nerifolia</i> , Sm.	+	+	+	+	+	+	-	-	-

Table 2: Horizontal and Vertical Distribution of plant species in Chameli Community Forest (Contd.)

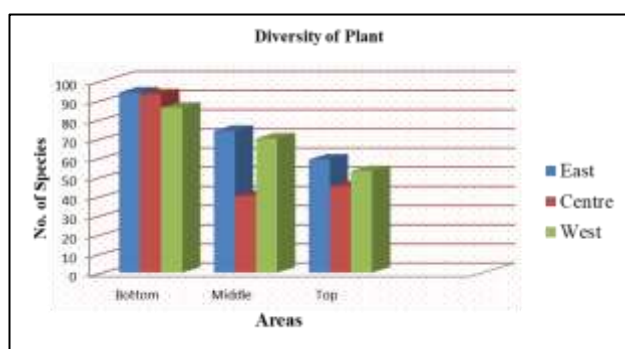
S.N.	Scientific name of plants	Bottom of the hill			Middle of the hill			Top of the hill		
		East	Centre	West	East	Centre	West	East	Centre	West
44	<i>Ficus religiosa</i> ,L.	+	+	+	+	-	+	-	-	-
45	<i>Ficus sermentosa</i> ,Duch-Ham.	-	+	+	-	-	-	-	-	-
46	<i>Flemengia macrophylla</i> , (Willd)Merr.	-	-	-	-	-	-	+	+	+
47	<i>Fraxinix floribunda</i> , Wall.	-	-	-	-	+	+	+	-	-
48	<i>Gaultheria fragrantissima</i> ,Wall.	-	+	-	+	+	+	+	-	+
49	<i>Gaultheria hookeri</i> , C.B clarke.	-	-	-	+	+	+	+	+	+
50	<i>Gnaphalium leuto-album</i> ,D.Don.	-	+	-	-	-	+	+	-	-
51	<i>Hedera nepalensis</i> , k.koch.	-	-	-	-	+	-	+	-	-
52	<i>Hedyotis scandens</i> , Roxb.	+	-	-	+	-	-	-	-	-
53	<i>Homalium nepalense</i> , (COC-) Benth.	-	-	-	-	+	+	-	-	-
54	<i>Inula cappa</i> (Buch-ham.ex.D.Don) DC.	-	-	-	-	-	-	+	+	+
55	<i>Isodon sacropularioides</i> , (Wall.)Murata.	-	-	-	+	-	-	+	+	-
56	<i>Jasminum dispernum</i> , L	+	+	+	+	-	-	-	-	-
57	<i>Jasminum humile</i> ,L.	-	+	-	-	-	-	-	-	-
58	<i>Lantana camara</i> ,L	+	+	+	+	-	+	-	-	-
59	<i>Liqustrum confusum</i> ,Decne.	-	-	+	-	-	-	+	-	+
60	<i>Litsea monopetala</i> , (Rbox.) pers.	-	-	+	+	-	+	-	-	-
61	<i>Lyonia ovalifolia</i> ,Wall.	-	-	-	+	+	+	+	+	+
62	<i>Maesia chisia</i> , Buch-ham.ex.D.Don.	-	+	-	+	+	+	-	+	-
63	<i>Melastoma melabathricum</i> ,L.	-	+	+	+	-	+	+	+	+
64	<i>Michelia champaca</i> ,L.	+	+	+	+	+	+	-	-	-
65	<i>Myrica esculenta</i> ,Buch-ham ex.D Don.	+	+	+	+	+	+	-	-	-
66	<i>Myrsine capitellata</i> , Wall.	-	+	-	+	+	-	+	-	-
67	<i>Myrsine semiserrate</i> ,Wall.	-	+	+	-	+	+	-	+	+
68	<i>Nicotiana tabacum</i> ,L.	+	-	-	-	-	-	-	-	-
69	<i>Nyctanthes arbor-tristis</i> ,L.	+	-	-	-	-	-	-	-	-
70	<i>Ocimum barbatum</i> ,L.	-	-	+	-	-	+	+	+	+
71	<i>Ocimum basilicum</i> ,L.	-	-	-	-	-	+	+	+	+
72	<i>Osyris wightiana</i> ,Wall.ex.wight.	-	-	+	-	-	+	+	-	+
73	<i>Oxalis latifolia</i> , H.B.K.	+	+	+	-	-	-	-	-	-
74	<i>Phlomis setigera</i> ,Falc.ex.Benth.	+	+	+	-	-	-	-	-	-
75	<i>Phyllanthus emblica</i> ,L.	+	-	+	-	-	-	-	-	-
76	<i>Phyllanthus parvifolium</i> ,Buch-Ham.	+	+	+	-	-	-	-	-	-
77	<i>Piper longum</i> ,Linn.	-	-	-	+	-	-	+	+	+
78	<i>Potentilla leschmaaltina</i> ,Ser.	+	-	-	+	-	-	-	-	-
79	<i>Polygonum hydropiper</i> ,Linn.	+	+	+	+	-	-	-	-	-
80	<i>Prunus cerasoides</i> ,D.Don.	+	+	-	-	-	-	-	-	-
81	<i>Pterospermum acerifolium</i> ,(L.) Willd.	+	-	+	-	-	-	-	-	-
82	<i>Pyrus pashia</i> , Buch-Ham ex.	-	+	-	+	+	+	-	-	-
83	<i>Quercus glauca</i> ,Thump.	-	-	-	-	+	+	+	-	-
84	<i>Reinwardtia indica</i> , Dumart.	-	-	-	-	-	-	+	+	+
85	<i>Reinwardtia trigyana</i> , Planch.	+	+	-	-	+	+	-	-	-
86	<i>Rhododendron arboreum</i> ,	+	+	+	+	+	+	+	+	+
87	<i>Rhus javanica</i> , L.	+	+	-	-	-	-	-	-	-

Table 2: Horizontal and Vertical Distribution of plant species in Chameli Community Forest (Contd.)

S.N.	Scientific name of plants	Bottom of the hill			Middle of the hill			Top of the hill		
		East	Centre	West	East	Centre	West	East	Centre	West
88	<i>Rosa indica</i> , L.	+	+	-	-	-	-	-	-	-
89	<i>Rubus accuminatus</i> , T.ex sm.	+	-	+	+	-	-	+	-	-
90	<i>Rubus ellipticus</i> , Smith.	+	+	+	+	-	-	-	-	-
91	<i>Rumex dentatus</i> , L.	+	+	+	+	-	+	+	-	-
92	<i>Rungia himalayenthes</i> , C.B clarke.	-	+	-	-	-	-	-	-	-
93	<i>Salvia officinales</i> ,	-	+	-	-	-	-	-	-	-
94	<i>Schima wallichii</i> , DC.	+	+	+	+	+	+	+	+	+
95	<i>Scutellaria discolor</i> ,Buch-Ham.	-	-	-	-	-	-	+	+	+
96	<i>Scutellaria repens</i> ,Buch-Ham.	+	+	+	+	-	-	-	-	-
97	<i>Semicarpus anacardium</i> , L.F.	+	-	+	+	+	-	-	-	-
98	<i>Sida cordifolia</i> , L.	+	-	+	+	+	-	-	-	-
99	<i>Sida rhombifolia</i> , L.	-	+	-	-	+	-	-	-	-
100	<i>Solanum aculeatissum</i> .	+	+	+	-	-	-	-	-	-
101	<i>Solanum nigrum</i> , Linn.	+	+	+	+	-	+	+	-	+
102	<i>Solena heterophylla</i> , Lour.	+	+	+	-	+	-	-	-	-
103	<i>Strobilanthus pentistimonoides</i> , Ness.	-	-	-	-	-	-	+	+	+
104	<i>Syzigium jambolana</i> , DC.	-	-	-	+	+	+	+	+	+
105	<i>Terminalia arjuna</i> ,(Roxb ex. DC) W.and .A.	-	-	-	+	+	+	-	+	+
106	<i>Tripterospermum volubile</i> , (D.Don) H.Hara.	+	+	+	+	-	+	+	-	+
107	<i>Urtica dioica</i> , Linn.	-	+	-	+	-	-	+	-	-
108	<i>Vigna angularis</i> , (Willd) Ohcoi&Ohashi.	-	-	-	-	-	+	+	+	-
109	<i>Zanthoxylum armatum</i> , DC.	-	-	-	-	-	+	+	+	+
110	<i>Zizypus incurva</i> , Roxb.	+	+	+	+	-	+	-	+	
Scientific name of plants (Monocot)										
1	<i>Allium wallichii</i> , Kunth.	-	-	-	-	+	-	-	+	-
2	<i>Bambusa vulgare</i> , Schrad.	+	+	+	+	+	+	-	-	-
3	<i>Carex baccans</i> , Nees.	-	-	+	-	-	+	+	-	+
4	<i>Carex filicina</i> , Nees.	-	-	+	-	-	+	+	-	+
5	<i>Cautleya spicata</i> , (J.E.Smith) Baker.	+	-	+	-	-	+	-	-	-
6	<i>Chlorophytum nepalense</i> , (Linal.) Baker.	-	-	+	-	-	+	-	-	-
7	<i>Curculigo orchioides</i> , Gaertn.	+	-	-	-	-	-	-	-	-
8	<i>Cyperus compactus</i> , Retz.	+	-	+	-	-	-	+	+	+
9	<i>Cyperus compressus</i> , L.	+	-	+	-	-	-	+	+	+
10	<i>Cyrtococcum patens</i> , (L.) A. Camus.	+	+	-	+	-	-	+	+	+
11	<i>Drepanostanchyum intermedium</i> , Keng.f.	+	+	+	-	-	+	-	-	-
12	<i>Digitaria ciliaris</i> , (Retz.) Koeler.	+	+	+	-	-	-	-	-	-
13	<i>Globba racemosa</i> , Sarro clarkei, baker	-	-	-	+	-	+	+	-	+
14	<i>Globba witinii</i> , S.m	-	-	-	+	-	+	+	+	+
15	<i>Heteropogan contortus</i> ,(L.) Beauvois	+	+	+	-	-	-	-	-	-
16	<i>Hypericum japonicum</i> , Thumb-ex Murray	+	-	+	-	-	-	-	-	-
17	<i>Leea aspara</i> , L.	-	-	-	-	-	+	+	+	+
18	<i>Leersia hexandra</i> , Sw.	-	-	-	-	-	+	+	+	+
19	<i>Ophiopogon clarkei</i> , hook.	+	+	+	-	-	-	-	+	-

Table 2: Horizontal and Vertical Distribution of plant species in Chameli Community Forest (Contd.)

S.N.	Scientific name of plants	Bottom of the hill			Middle of the hill			Top of the hill		
		East	Centre	West	East	Centre	West	East	Centre	West
20	<i>Osbeckia nepalensis, hook.</i>	+	-	-	-	-	+	+	-	+
21	<i>Paspalum distinchum, L.</i>	+	+	+	+	-	+	+	-	+
22	<i>Smilax aspera, L.</i>	+	+	+	+	-	-	+	-	-
23	<i>Smilax lancaefolia, L.</i>	+	+	+	+	-	-	-	-	-
24	<i>Smilax ovalifolia, L.</i>	+	-	+	+	-	-	-	-	-
25	<i>Thysanolaena maxima, (Roxb.) D.Kuntze.</i>	+	+	+	+	-	-	-	-	-
26	<i>Urochloa ramosa, (L.) T.Q. Nguyen.</i>	+	+	+	+	-	+	+	-	+
Scientific name of plants (Pteridophyta)										
1	<i>Aleuritopteris bicolor, (Roxb.) Fraser.Jenk.</i>	+	-	+	-	+	+	+	-	-
2	<i>Athyrium foliolosum, T.Moore.ex.R.Sim.</i>	+	+	+	+	-	-	+	+	-
3	<i>Coniogramme fraxinae, (D.Don) Fee.ex.Diels.</i>	+	+	+	-	-	-	+	-	-
4	<i>Dicranopteris lanigera, (D,Don) Fraser.Jenk.</i>	+	+	+	-	-	-	-	-	-
5	<i>Diplazium giganteum, (Wall.ex.Hook. and Bauer) Nakai.</i>	+	+	-	-	-	-	-	-	-
6	<i>Dryopteris cochleata, (D.Don) c.chr.</i>	+	+	+	-	+	+	0	-	-
7	<i>Dryopteris sparsa, (D.Don) c.chr.</i>	+	+	+	+	-	+	-	-	-
8	<i>Equisetum arvense L.subsp.diffusum (D.Don) Fraser-Jenk.</i>	+	+	+	-	-	-	-	-	-
9	<i>Lycopodium japonicum, Thump. Sw.</i>	+	+	-	-	-	-	-	-	-
10	<i>Lygopodium japonicum, Thump. Sw.</i>	+	+	+	+	-	-	-	-	-
11	<i>Nephrolepis cordifolia, (L.) presl.</i>	+	+	+	-	-	-	-	-	-
12	<i>Odontosoria echinesis, (L) J.Sm.</i>	+	+	+	-	-	-	-	-	+
13	<i>Oleandra wallichii, (Willd.) Ching.</i>	+	+	-	+	+	-	-	-	+
14	<i>Pteridium revolutum, (Blume) Nakai.</i>	+	+	-	-	-	+	-	-	-
15	<i>Tectaria coadunata.</i>	+	+	-	+	-	-	-	-	-
Scientific name of plants (Gymnosperm)										
1	<i>Pinus roxburghii, Sargent.</i>	+	-	+	+	-	+	+	+	+
Total Plant		94	92	86	74	40	70	59	45	53

**Fig. 2:** Horizontal and Vertical Distribution.

Some plants species like *Fraxinus floribunda*, *Inula cappa*, *Ocimum barbatum*, *Ocimum basilium*, *Piper longum*, *Reinwardtia indica*, *Scutellaria discolor*, *Castanopsis indica*, *Castanopsis tribuloides*, *Cleyera ochracea*, *Desmodium concinuum*, *Desmodium elegens*, *Englehardtia spicata*, *Flemingia macrophylla*, *Syzgium jambolana*, *Zanthoxylum armatum*, *Cyperus compactus*, *Cyrtococcum*

patens were dominant on the top region (1590 masl) whereas *Gaultheria hookeri*, *Quercus glauca*, *Rubus accuminatus*, *Ajuga macrosperma*, *Anaphalis adnata*, *Choerospondias axillaris*, *Crepis japonica*, *Urtica dioica*, *Allium wallichii*, *Aleuritopteris bicolor* were sparse on the top region of the study area.

During the study, it was found that subtropical plants species cover much numerous than the high hill plant species. This is due to the low elevation (1400-1590m) of the study area. Horizontally, eastern elements were found more numerous than the western (Fig. 2). Therefore, from the study of Chameli Community Forest it was revealed that the forest was slightly disturbed, non-polluted, highly diversified and interesting. The study would be helpful for the people who are willing to get information on floristic composition of Chameli Community Forest. The diversity of tropical element is high due to its moderate climatic condition (Fleming, 1973). He had considered the

vegetation of central midland as subtropical. Similar studies as vertical as well as horizontal distribution was also done by (Sakya, 1973). Horizontally, eastern elements were found more numerous than the western. Bhattarai and Vetaas (2003) studied the variation in plant species richness of different life forms. Pandit (1999) worked on altitudinal impact on vegetation distribution in Chimkeshori Hill.

Acknowledgement

I am extremely grateful to Mr. Prakash Bahadur Shrestha, Associate Professor and Head of Department of Botany, Trichandra Multiple Campus for providing me necessary administrative requirement to complete the task.

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