



Checklist of Angiosperm plants in Sami taluka, Patan, Gujarat

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ABSTRACT

Biodiversity plays an essential function in enhancing human life quality. Biodiversity contributes to human well-being in a variety of ways. Some of the necessary services include controlling atmospheric gas composition, regulating biogeochemical cycles, preventing soil erosion, preserving soil fertility, keeping water balance, and natural pest management within ecosystems. Patan, the former capital of Gujarat, is known for its Patola sarees, which are among the best handcrafted textiles in the world. Anhil-Vad-Patan was the original name of this historic town, which was founded in 796 AD. Patan's splendour reached its height during the Solanki period, Gujarat's golden age. The Sami is a historically significant location. It has a lot of historical significance, as well as a lot of sacred groves places. It is located in the Patan district in Gujarat's north Gujarat area. Floristic diversity research in Gujarat's Sami taluka in the Patan district was conducted from November 2021 to February 2022 in order to compile a checklist of angiosperm flora. During the Survey, 207 plant species were discovered, divided into 171 genera and 67 Angiosperm families. Plant species from across the Sami taluka were collected and identified in the study using several regional floras and scientific papers. Habit, habitat, flowering-fruiting seasons, locale, and other factors were noted during the research. Each collected species and their herbarium was prepared. Cropland dominates the area, which is located in a semi-arid biogeographical region of Sami. The paper deals with native species of Angiosperm belonging to Sami district.

Key words: Biodiversity, Checklist, Angiosperms, Invasive species, Sami, Patan, North Gujarat

INTRODUCTION

Floristic surveys are essential for determining the biodiversity of a given region. The most significant component of a floristic study is to learn about plant species identification and distribution in a given region. The purpose of this investigation was to determine the floristic diversity of Sami taluka in the Patan district. Sami is a taluka in Gujarat's north-western area.

Gujarat's angiosperm flora is diverse in terms of size and composition. Higher plants are divided into 902 genera and 155 families, with a total of 2198 species. There are 1808 plant species recognised in Gujarat's flora [G.L Shah, 1978]. Floristic study includes the study of all flowering plants in selected area and flowering plants include gymnosperms and angiosperms. Angiosperms are the largest group in the Plant kingdom in the world. There are 250000 species, 12000 genera and 300 families in the world while India has 45000 plant species. Species diversity varies greatly through space and time [Mackey, R.L, *et al.*, 2001].

This survey not only revealed the state of wild plant species present in Sami, but it also included the collection of cultivated and ornamental plants. The cultivation of diverse rural and urban crop species in Sami taluka is also crucial for determining the current state of biodiversity.

The cultivation of numerous rural and urban crop species in Sami Taluka is also crucial for determining the current state of biodiversity. Across the Sami, many cultivar species are now growing in their natural state. The major goal of the floristic study of Sami taluka is to examine the taluka's diverse Phytodiversity. During the current investigation, 207 plant species from 67 families were identified.

STUDY AREA

Sami taluka is in Patan district, in the northern section of the state, with Patan town as its administrative centre. It is located 46 KM towards South from District headquarters Sami. 130 KM from State capital Gandhinagar towards North. The population of Sami taluka is 182,805, the taluka covers an area of 1593.74 sq. km. The Sami taluka is surrounded by Radhanpur Taluka in the north and west, Harij taluka in its north east, Little Rann of kutch in the east, and Shankheshwar southeast.

PHYSIOGRAPHY

The Sami district is located between 23.687176' n latitude and 71.778619' e longitude. In the northern portion of Gujarat, Sami is located at an elevation of 82.30 metres above sea level. The region receives about 701 mm of rain on average. On the banks of the Saraswati River, Sami is located in Gujarat's northern region. Saraswati River is a river in Gujarat, India, that originates from the Aravalli hill. Its basin stretches about 360 kilometres. The basin's overall catchment area is 370 square kilometres (140 sq. mi) [Baldev V. Panchal, *et al.*, 2018].

Soil

90% of the soil in Patan district is soft brown clay. The soil is weak and saline in portions of Sami taluka, and the subsurface water is brackish. In some portions of the district, the sandy loam soil varies in richness and composition. The soil of the talukas of Chanasma, Harij, Sami, Radhanpur, Shankheshwar, and Shantalpur is salty.

Patan district is located in the Gujarat plain and is divided into three sub-microregions: Western Sandy Waste, Central Alluvial Plain, and Mahesana Low Land. In comparison to other districts, the Western Sandy Waste region has low relief. Saraswati, the region's main river, flows from north-east to south-west and eventually merges with the Little Rann of Kachchh. All three divisions are made up of wind-blown sand, and almost the entire region has alluvium deposition, with a clay layer thickness of 4 m. The region's soils are Orthids-Aquepts, Orthids-Psamments, and Ochrepts-Psamments. The Central Alluvial Plain slopes westward. As a result, all of the rivers Banas, Saraswati, Rupen, and their tributaries that make up the drainage pattern of this region flow westward [Pankaj Kumar, *et al.*, 2017].

Climate And Temperature

The dry climate may be found in Kachchh district, western Banaskantha, Mehsana district, and Patan district in Gujarat's northwest. According to the climatic conditions of Sami taluka, there are six seasons in the area:

I. The Winter (Dec. & Jan.)

II Early Summer (Feb. & Mar.)

III. End of Summer (Apr. & May)

V. Early Monsoon is the fourth stage of the monsoon season (Jun. & Jul.).

VI. The End of the Monsoon (Aug. & Sep.).

VII. Post-Monsoon (Oct and Nov).

The region is having the minimum temperature as low as 5°C to 10°C and maximum temperature as high as 40°C to 48°C [H.M. PATEL, *et al.*, 2017].

MATERIALS AND METHODS

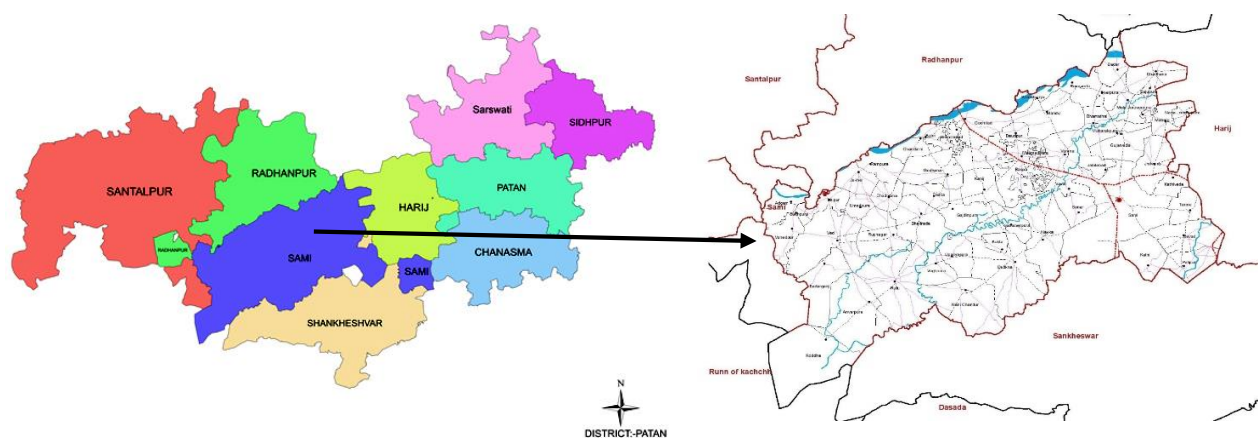
Regular field visits were taken throughout this effort, and different areas of Sami taluka were frequently visited. The inquiry mentioned above took place between November 2021 and February 2022. Plants were collected in various stages and images were taken on collection trips. Plants were identified using the Flora of Gujarat state, which included characteristics such as habit, habitat, life form, and growth type [G.L Shah, 1978]

All of the selected plant species are sorted and provided with scientific names, local names, families, habit, and locality in the present work, according to Bentham & Hooker. The specimens were collected and then pressed on blotting papers for herbarium preparation. Then it's taken to the lab for additional processing. Using Fevicol, the dried specimens were numbered and mounted on standard herbarium sheets. The 1 percent Mercury chloride poisoned all herbarium sheets (HgCl₂). The plants are listed alphabetically by family, with scientific names, local names, habitats, and locations. Herbarium specimens were stored at the Botany Department's herbarium at Gujarat University's Serenity Library in Ahmedabad [Mayur. J Patel, *et al.*, 2021].

RESULT AND DISCUSSION

During the winter season, the study discovered 207 species of flowering plants belonging to 171 genera and 67 families. The papers on the Fabaceae family contain the most species. Amaranthaceae, Apocynaceae, Fabaceae, Poaceae, and Solanaceae are the five families with the most species. Out of which 71 trees, 63 herbs, 40 shrubs, 15 grasses, 18 climbers and are present as different habit of plants. Study reveals 88 percent Dicot, 10 percent Monocot, and 2 percent of Gymnosperms. The Fabaceae family has the most dominant species, with 16 species. About 12 species have been listed as invasive species.

Fig:1 Map to Sami taluka

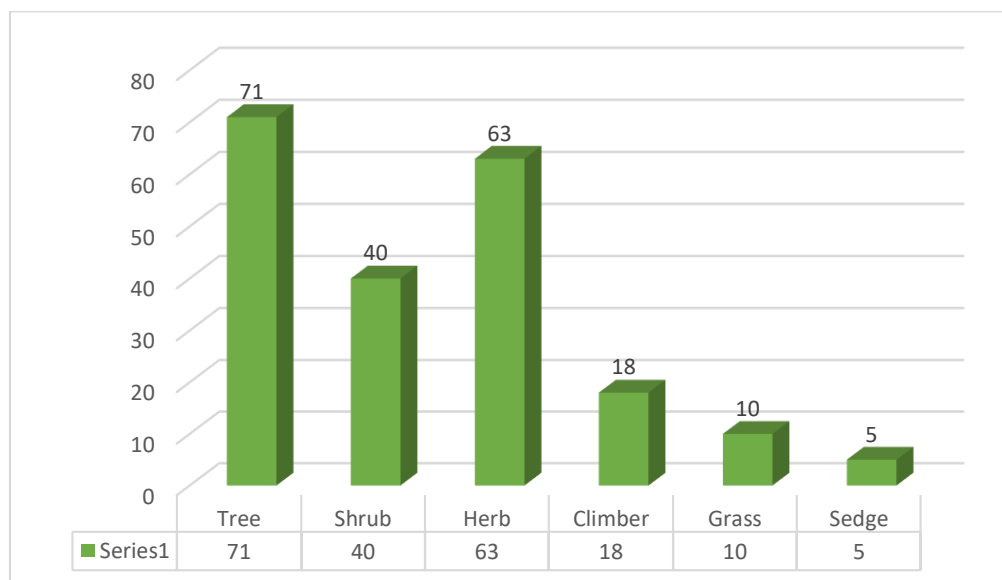


Patan District

Sami taluka

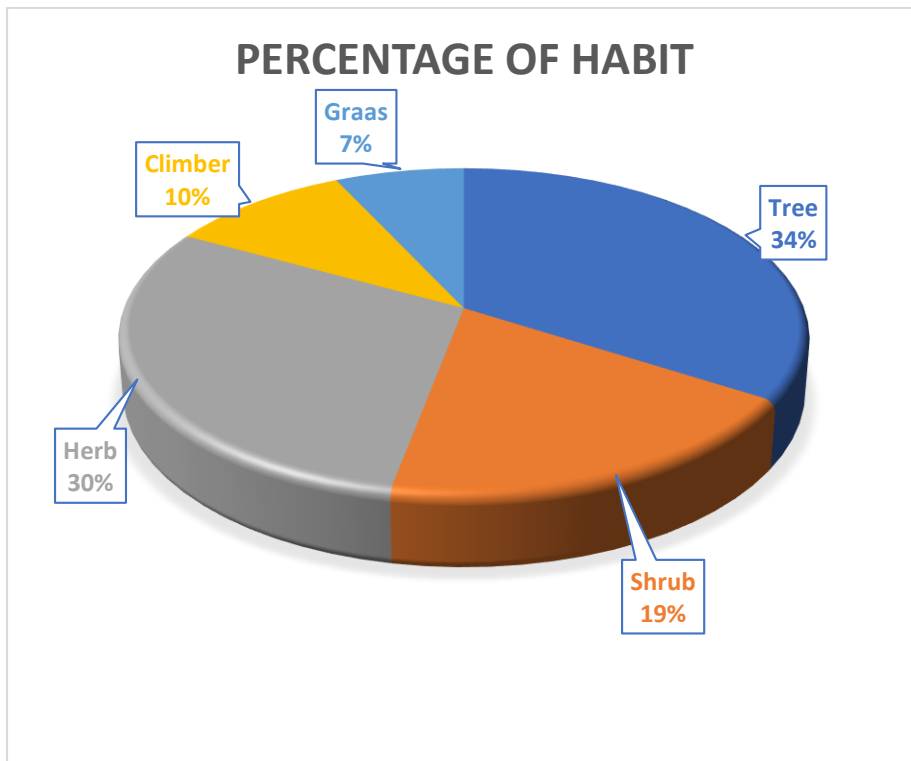
The study reveals 207 Species belonging to 67 Families and 171 Genera. Which includes 71 trees, 40 shrubs, 63 herbs, 18 climber, Sedge 5 and 10 Grasses.

Graph:1 No of species in different habit

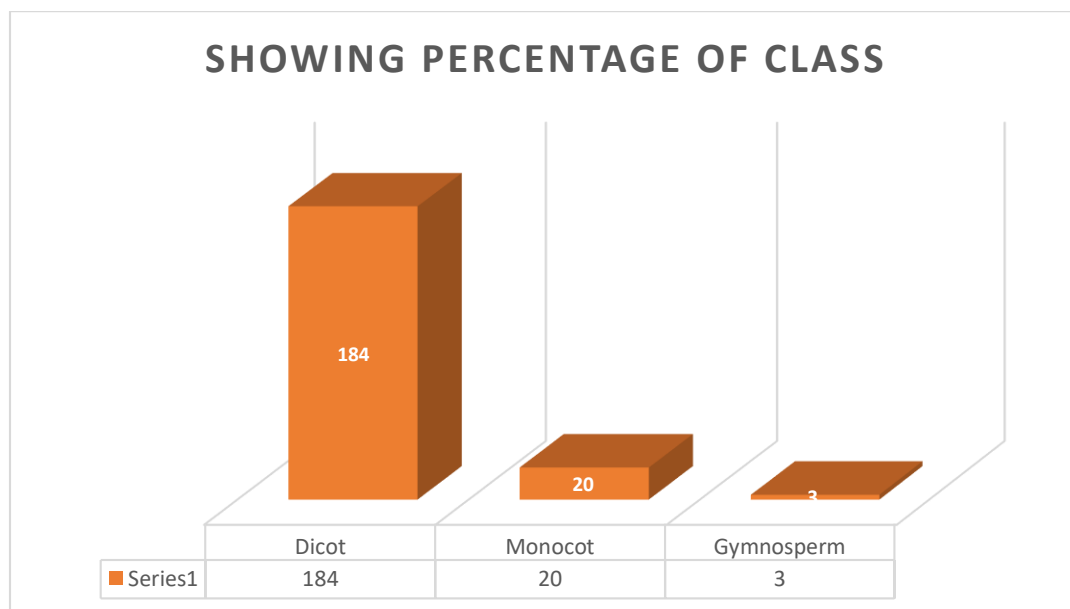


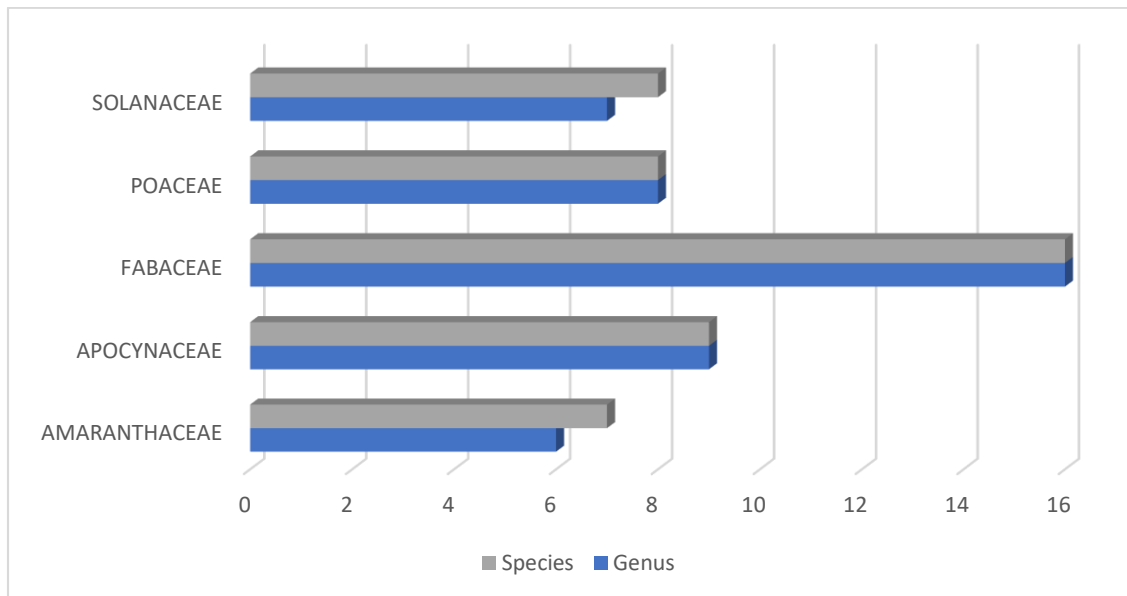
In which 38% trees, 20% shrubs, 33% herbs, 9% climbers are reported.

Graph:2 Graph showing percentage of habit



Graph:3 Showing percentage of class



Graph:4 Five largest families with maximum no species and genera.

Study reports fabaceae represent maximum number of species. Amaranthaceae, Solanaceae, Apocynaceae and Poaceae represent 7,8,9,9 species respectively.

Table:1 List of families and number of species in Sami taluka

Sr.no	Family	Genus	Species
1	Acanthaceae	1	1
2	Amaranthaceae	6	7
3	Anacardiaceae	1	1
4	Annonaceae	2	2
5	Apiaceae	6	6
6	Apocynaceae	9	9
7	Arecaceae	4	5
8	Asclepiadaceae	2	2
9	Asteraceae	6	6
10	Bignoniaceae	1	1
11	Bombacaceae	1	1
12	Boraginaceae	2	4
13	Brassicaceae	2	3
14	Caesalpiaceae	5	6
15	Cannaceae	1	1
16	Capparaceae	2	3
17	Caricaceae	1	1
18	Caryophyllaceae	2	2
19	Casuarinaceae	1	1
20	Chenopodiaceae	1	1
21	Combretaceae	2	3
22	Convolvulaceae	3	3
23	Cucurbitaceae	5	5
24	Cuscutaceae	1	1
25	Cyperaceae	3	6
26	Ehretiaceae	1	2
27	Euphorbiaceae	4	6

28	Fabaceae	16	16
29	Lamiaceae	4	6
30	Liliaceae	3	5
31	Lythraceae	1	1
32	Magnoliaceae	1	1
33	Malvaceae	5	6
34	Meliaceae	1	1
35	Menispermaceae	2	2
36	Mimosaceae	2	2
37	Moraceae	2	4
38	Moringaceae	1	1
39	Mosaceae	1	1
40	Myrtaceae	4	5
41	Nyctaginaceae	2	3
42	Nymphaeaceae	1	1
43	Oleaceae	2	3
44	Orabanchaceae	1	1
45	Papaveraceae	1	1
46	Passifloraceae	1	1
47	Pedaliaceae	1	1
48	Phyllanthaceae	1	2
49	Poaceae	8	8
50	Polygonaceae	1	1
51	Punicaceae	1	1
52	Rhamnaceae	1	2
53	Rosaceae	1	1
54	Rubiaceae	3	4
55	Rutaceae	3	3
56	Salvadoraceae	1	2
57	Santalaceae	1	1
58	Sapindaceae	1	1
59	Sapotaceae	1	1
60	Simaroubiceae	1	1
61	Solanaceae	7	8
62	Sterculiaceae	1	1
63	Tamaricaceae	1	3
64	Tiliaceae	1	2
65	Ulmaceae	1	1
66	Verbenaceae	6	6
67	Zygophyllaceae	2	2

Table:2 Invasive species of Sami Taluka:

Sr.no	Species	Family	Common Name	Habit	Native
1.	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Amarvel	Climber	Mediterranean
2.	<i>Datura metel</i> L.	Solanaceae	Dhaturo	Shrub	Trop. America
3.	<i>Echinochloa colona</i> (L.) Link	Poaceae		Graas	Trop. South America
4.	<i>Emillia sonechifolia</i>	Asteraceae	Hiran-Khuri	Herb	Trop. America
5.	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Nani Lalpatti	Shrub	Trop. America

6.	<i>Lantana camara</i> L. var. <i>aculeata</i> (L.) Mold.	Verbenaceae	Dhanidariyo	Shrub	Trop. America
7.	<i>Nicotiana tabacum</i> L.	Solanaceae	Tamaku	Herb	Trop. America
8.	<i>Passiflora fortida</i> L.	Passifloraceae		Climber	Trop. South America
9.	<i>Pennisetum typhoides</i> (Burm.f.) Stapf. & Habb.	Poaceae	Bajri	Graas	Trop. America
10.	<i>Prosopis juliflora</i> (Sw.) DC.	Fabaceae	Gando Baval	Tree	Mexico
11.	<i>Tridax procumbens</i> L.	Asteraceae	Bhangro	Herb	Trop. America
12.	<i>Xanthium strumarium</i> L.	Asteraceae	Gadariyu, Gokhru	Herb	Trop. America

About 12 species have been listed as invasive species.

Table:3 Checklist of flowering plants of Sami taluka

Sr.no	Species	Family	Common name	Habbit
1.	<i>Abrus precatorius</i> L.	Fabaceae	Chanothi	Climber
2.	<i>Abelmoshchus moschatus</i> MEDIC.	Malvaceae	Bhindo	Herb
3.	<i>Abutilon indicum</i> (L.) Sw.	Malvaceae	Kanski	Shrub
4.	<i>Acacia chundra</i>	Mimosaceae	Kher, Kheir	Tree
5.	<i>acacia nilotica</i>	Fabaceae	Desi Baval	Tree
6.	<i>Acalypha indica</i> L.	Euphorbiaceae	Vinchi Kanto	Herb
7.	<i>Achyranthes aspera</i> L. var	Amaranthaceae	Aghedi	Herb
8.	<i>Adhatoda vasica</i> (L)Nees	Acanthaceae	Ardusi	Shrub
9.	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bili	Tree
10.	<i>Aeluropus lagopoides</i>	Poaceae		Grass
11.	<i>Aerva lantana</i>	Amaranthaceae		Herb
12.	<i>Ailanthus excelsa</i> Roxb.	Simaroubiceae	Arduso	Tree
13.	<i>Albizia lebbeck</i> (L.) Bth.	Fabaceae	Shiris	Tree
14.	<i>Alhagi maurorum</i>	Fabaceae		Herb
15.	<i>Allium cepa</i> L.	Liliaceae	Dungri	Herb
16.	<i>Allium sativum</i> L.	Liliaceae	Lasan	Herb
17.	<i>Aloe barbadenseis</i> Mill.	Liliaceae	Kuvarpathu	Herb

18.	<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	Saptaparni	Tree
19.	<i>Alternanthera sessilis</i> (L.)DC.	Amaranthaceae	Jal Jambvo	Herb
20.	<i>Amaranthu hybridus</i> L.	Amaranthaceae	Rajgaro	Herb
21.	<i>Anethum graveolens</i> L.	Apiaceae	Suva	Herb
22.	<i>Anisomeles indica</i>	Lamiaceae		Herb
23.	<i>Annona squamosa</i> L.	Annonaceae	Sitafal	Tree
24.	<i>Argemone mexicana</i> L.	Papaveraceae	Darudi	Herb
25.	<i>Asparagus racemosus</i> Willd.	Liliaceae	Satavari	Climber
26.	<i>Asphodelus tenuifolius</i> Cav.	Liliaceae	Dungro	Herb
27.	<i>Avena sativa</i>	Poaceae	Oat	Grass
28.	<i>Azadirachta indica</i> A.Juss	Meliaceae	Limdo, Limbdo	Tree
29.	<i>Bambusa arundinacea</i> (Retz.)Willd	Poaceae	Bambu	Grass
30.	<i>Bismarckia nobilis</i>	Arecaceae	Fan Palm	Tree
31.	<i>Blumea balsamifera</i>	Asteraceae		Herb
32.	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Satodi	Herb
33.	<i>Bolboschoenus maritimus</i>	Cyperaceae		Graas
34.	<i>Bombax ceiba</i> L.	Bombacaceae	Simlo	Tree
35.	<i>Bougainvillea glabra</i> DC.	Nyctaginaceae	Boganvel	Shrub
36.	<i>Bougainvillea spectabilis</i> Willd.	Nyctaginaceae	Boganvel	Shrub
37.	<i>Brassica juncea</i> (L.)Czern.&Coss	Brassicaceae	Rai	Herb
38.	<i>Brassica oleracea</i> var. <i>capitata</i> L.	Brassicaceae	Kobi, Cabbage	Herb
39.	<i>Butea monosperma</i> (Lam.)Taub.	Fabaceae	Khakhro	Tree
40.	<i>Caesalpinia pulcherrima</i> (L.) Sct. Obs.	Caesalpiniaceae	Galtoro	Shrub

41.	<i>Cajanus cajan</i> (L.) Millsp.	Fabaceae	Tuver	Shrub
42.	<i>Calotropis procera</i> (Ait)R.Br.	Asclepiadaceae	Akdo	Shrub
43.	<i>Canna indica</i> L.	Cannaceae	Kena	Herb
44.	<i>Capparis decidua</i> (Forsk.)Edgew	Capparaceae	Kerdo	Shrub
45.	<i>Capparis spinosa</i>	Capparaceae	Kantalo	Shrub
46.	<i>Capsicum annum</i> L.var. <i>acuminata</i> Fingerh	Solanaceae	Mirchi	Shrub
47.	<i>Cardiospermum</i> <i>halicacabum</i> L.	Sapindaceae	Kagdoliyo	Climber
48.	<i>Carica papaya</i> L.	Caricaceae	Papaiya	Tree
49.	<i>cascabela thevetia</i>	Apocynaceae		Shrub
50.	<i>Cassia fistula</i> L.	Caesalpiniaceae	Garmalo	Tree
51.	<i>Cassia siamea</i> Lam.	Caesalpiniaceae	Kassod Tree,	Tree
52.	<i>Casuarina equisetifolia</i> L.	Casuarinaceae	Sharu	Tree
53.	<i>Catharanthus roseus</i> (L.) G.Don	Apocynaceae	Barmasi	Shrub
54.	<i>Chenopodium album</i> L.	Chenopodiaceae	Chil Ni Bhaji	Herb
55.	<i>Cicer arietinum</i> L.	Fabaceae	Chana	Herb
56.	<i>cissamplos pareira</i>	Menispermaceae		Climber
57.	<i>Cistanche tubulosa</i>	Orobanchaceae		Herb
58.	<i>Citrullus lanatus</i> (Thunb.) M. & A.	Cucurbitaceae	Tarbuch	Climber
59.	<i>Citrus limon</i> (L.) Burm.f.	Rutaceae	Limbu	Tree
60.	<i>Cleome viscosa</i> L.	Capparaceae	Pili Talvani	Herb
61.	<i>Clerodendrum inerme</i> (L.) Gaertn.	Verbenaceae	Vad Mendi	Shrub
62.	<i>Clitoria ternatea</i> L.	Fabaceae	Garni	Climber
63.	<i>Cressa cretica</i>	Convolvilaceae		Herb
64.	<i>Coccinia grandis</i> (L.)Voigt.	Cucurbitaceae	Tindora	Climber
65.	<i>Cocos nucifera</i> L.	Arecaceae	Nariel	Tree
66.	<i>colophospermum mopan</i>	Fabaceae		Tree
67.	<i>Combretum leprosum</i>	Combretaceae		Shrub

68.	<i>Convolvulus arvensis</i> L.	Convolvulaceae	Phudardi, Nerivel	Climber
69.	<i>Corchorus aestuans</i> L.	Tiliaceae	Chhunchh	Herb
70.	<i>Corchorus olitorius</i> L.	Tiliaceae	Nani Chhunchh	Herb
71.	<i>Cordia dichotoma</i> Forst. F.	Ehretiaceae	Gundo	Tree
72.	<i>Cordia sebestena</i> L.	Ehretiaceae	Gunda	Tree
73.	<i>Coriandrum sativum</i> L.	Apiaceae	Kothmir	Herb
74.	<i>Cucumis sativus</i> L.	Cucurbitaceae	Kakdi	Climber
75.	<i>Cuminum cyminum</i> L.	Apiaceae	Jiru,	Herb
76.	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Amarvel	Climber
77.	<i>Cyperus arenarius</i> Retz.	Cyperaceae		Sedge
78.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Dharo	Sedge
79.	<i>Cyperus compressus</i> L.	Cyperaceae		Sedge
80.	<i>Cyperus nutans</i> Vahl.	Cyperaceae		Sedge
81.	<i>Cyperus rotundus</i> L. subsp. <i>Rotundus</i>	Cyperaceae	Chiyo, Moth	Sedge
82.	<i>Dactyloctenium aegyptium</i>	Poaceae		Graas
83.	<i>Dalbergia sisoo</i> Roxb.	Fabaceae	Sisam	Tree
84.	<i>Datura metel</i> L.	Solanaceae	Dhaturo	Shrub
85.	<i>Daucus carota</i> L. var. <i>sativa</i> DC.	Apiaceae	Gajar	Herb
86.	<i>Delonix regia</i> (Boj.) Raf.	Caesalpiniaceae	Gulmohar	Tree
87.	<i>Dianthus chinensis</i>	Caryophyllaceae		Herb
88.	<i>Duranta repens</i> L.	Verbenaceae	Damayanti	Shrub
89.	<i>Echinochloa colona</i>	Poaceae		Graas
90.	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Amla	Tree
91.	<i>Emillia sonechifolia</i>	Asteraceae	Hiran-Khuri	Herb
92.	<i>Ephorbia nutans</i>	Euphorbiaceae		Herb
93.	<i>Ervatamia divaricata</i> (L.) Burkill.	Apocynaceae	Taggar	Shrub

94.	<i>Eucalyptus globulus</i> Labil	Myrtaceae	Nilgiri	Tree
95.	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Nani Lalpatti	Shrub
96.	<i>Euphorbia nivulia</i> Buch - Ham.	Euphorbiaceae	Thor	Tree
97.	<i>Fagonia eretica</i>	Zygophyllaceae		Herb
98.	<i>Ficus benghalensis</i> L.	Moraceae	Vad, Vadlo	Tree
99.	<i>Ficus racemosa</i> L.	Moraceae	Umro	Tree
100.	<i>Ficus religiosa</i> L.	Moraceae	Piplo	Tree
101.	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Variari	Shrub
102.	<i>Gardenia jasminoides</i> L.	Rubiaceae	Gandharaj	Shrub
103.	<i>Gauzuma ulmifolia</i> Lam.	Sterculiaceae	Khoto Rudraksh	Tree
104.	<i>Gmelina arborea</i> Roxb.	Verbenaceae	Sivan	Tree
105.	<i>Gossypium arboreum</i> L. var. <i>neglectum</i> L.	Malvaceae	Desi Kapas	Shrub
106.	<i>Gossypium herbaceum</i> L.	Malvaceae	Kapas	Shrub
107.	<i>Halogeton glomeratus</i>	Amaranthaceae		Herb
108.	<i>Heliotropium</i> <i>Curassavicum</i>	Boraginaceae	Hathi sundhi	Herb
109.	<i>Heliotropium ovalifolium</i> Forsk.	Boraginaceae	Nani Hathi Sundhi	Herb
110.	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Jasud	Shrub
111.	<i>Holoptelea integrifolia</i> (Roxb.) Planch.	Ulmaceae	Kanji, Popti	Tree
112.	<i>Ipomoea aquatica</i> Forsk.	Convolvulcae	Nada Ni Bhaji	Herb
113.	<i>Ixora arborea</i> Roxb.	Rubiaceae	Naveri	Shrub
114.	<i>Ixora coccinea</i> L.	Rubiaceae	Rati naveri	Shrub
115.	<i>Jasminum officinale</i> L.	Oleaceae	Chameli	Climber
116.	<i>Jasminum sambac</i> Ait.	Oleaceae	Mogro	Shrub
117.	<i>Lagenaria vulgaris</i> Ser.	Cucurbitaceae	Dudhi	Climber

118.	<i>Lantana camara</i> L. var. <i>aculeata</i> (L.) Mold.	Verbenaceae	Dhanidariyo	Shrub
119.	<i>Lawsonia inermis</i> L.	Lythraceae	Mahendi	Shrub
120.	<i>Luffa acutangula</i> (L.) Roxb.	Cucurbitaceae	Turia	Climber
121.	<i>Lycopersicon lycopersicum</i> (L.) Karst.ex Farwell	Solanaceae	Tamato	Herb
122.	<i>Mangifera indica</i> L.	Anacardiaceae	Ambo	Tree
123.	<i>Marrubium</i> sp.	Lamiaceae		Herb
124.	<i>Medicago sativa</i>	Fabaceae	Rajko	Herb
125.	<i>Melilotus indicum</i>	Fabaceae		Herb
126.	<i>Mentha spicata</i> L.	Lamiaceae	Fudina	Herb
127.	<i>Michelia champaca</i> Linn.	Magnoliaceae	Champo	Tree
128.	<i>Mimusops elengi</i> L.	Sapotaceae	Bakul	Tree
129.	<i>Momordia charantia</i>	Apocynaceae	Karela	Climber
130.	<i>Moringa oleifera</i> L.	Moringaceae	Saragvo	Tree
131.	<i>Morus alba</i> L.	Moraceae	Setur	Tree
132.	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	Mitho Limbdo	Tree
133.	<i>Musa paradidiaca</i> L.	Mosaceae	Kela	Tree
134.	<i>Narium olender</i> L.	Apocynaceae	Lal Karen	Shrub
135.	<i>Nicotiana tabacum</i> L.	Solanaceae	Tamaku	Herb
136.	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Parijatak	Tree
137.	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	Poyna, Kamal	Herb
138.	<i>Ocimum basilicum</i> L.	Lamiaceae	Damro	Shrub
139.	<i>Ocimum gratissimum</i> L.	Lamiaceae	Ram Tulsi	Shrub
140.	<i>Ocimum sanctum</i> L.	Lamiaceae	Tulsi	Shrub
141.	<i>Oldenlandia corymbosa</i> L.	Rubiaceae	Pitpapdo	Tree
142.	<i>Parkinsonia aculeata</i> L.	Caesalpiniaceae	Ram Baval	Tree
143.	<i>Parsicaria lanpthifolia</i>	Polygonaceae		Herb
144.	<i>Passiflora fortida</i> L.	Passifloraceae		Climber

145.	<i>Peltophorum pterocarpum</i> (DC.) Baker.	Caesalpiniaceae	Copper Pod	Tree
146.	<i>Pennisetum typhoides</i> (Burm.f.) Stapf. & Habb.	Poaceae	Bajri	Graas
147.	<i>Pergularia daemia</i> (Forsk.) Choiv	Asclepiadaceae	Chamar Dudheli	Climber
148.	<i>phoenix dactylifera</i>	Arecaceae	Date Palm	Tree
149.	<i>Phoenix sylvestris</i> (L.) Roxb.	Arecaceae	Khajuri	Tree
150.	<i>Phyllanthus emlica</i>	Phyllanthaceae	Amla	Tree
151.	<i>phyllanthus</i> <i>maderaspatensis</i>	Phyllanthaceae		Herb
152.	<i>Physalis angulata</i>	Solanaceae		Herb
153.	<i>Pisum sativum</i> L.	Fabaceae	Vatana	Vine
154.	<i>Pithecellobium dulce</i> (Roxb.) Bth.	Mimosaceae	Goras Amla	Tree
155.	<i>Pluchea indica</i>	Asteraceae		Shrub
156.	<i>Plumeria acutifolia</i> Poir.	Apocynaceae	Champo	Tree
157.	<i>Polyalthia longifolia</i> (Sonn.) Thw.	Annonaceae	Asopalav	Tree
158.	<i>Prosopis chilensis</i> (Molina) Stun	Fabaceae	Gando Baval	Tree
159.	<i>Pulicariya sp.</i>	Asteraceae		Herb
160.	<i>Psidium guajava</i> L.	Myrtaceae	Jamphal	Tree
161.	<i>Phyla nudiflora</i>	Verbenaceae		Herb
162.	<i>Punica granatum</i> L.	Punicaceae	Dadam	Tree
163.	<i>Raphanus sativus</i> L.	Brassicaceae	Mulo	Herb
164.	<i>Ricinus communis</i> L.	Euphorbiaceae	Arandi	Shrub
165.	<i>Rosa indica</i> L.	Rosaceae	Gulab	Herb
166.	<i>Roystonea regia</i> (H.B. & K.) F.	Arecaceae	Bottle Palm	Tree
167.	<i>Salvadora oleoides</i> Decne.	Salvadoraceae	Piludi, Mota Pilu	Tree
168.	<i>Salvadora persica</i> L.	Salvadoraceae	Pilu	Tree
169.	<i>Santalum album</i> L.	Santalaceae	Chandan	Tree
170.	<i>Saraca asoca</i> (Roxb.) de	Fabaceae	Ahok	Tree

	<i>Wilde.</i>			
171.	<i>Schoenoplectiella mucronata</i>	Cyperaceae		Graas
172.	<i>Senna siamea</i>	Myrtaceae		Tree
173.	<i>Sesamum indicum</i> L.	Pedaliaceae	Tal	Herb
174.	<i>Sizigium jambos</i>	Myrtaceae	White Jamun	Tree
175.	<i>Solanum melongena</i> L.	Solanaceae	Ringan	Herb
176.	<i>Solanum virgianum</i>	Solanaceae		Herb
177.	<i>Sorghum vulgare</i> Pers.	Poaceae	Juwar	Graas
178.	<i>Spergularis arvensis</i>	Caryophyllaceae		Herb
179.	<i>Suaeda fruticosa</i>	Amaranthaceae		Tree
180.	<i>Suaeda nigra</i>	Amaranthaceae		Tree
181.	<i>Syzygium cumini</i> (L.) Skeels.	Myrtaceae	Jambu	Tree
182.	<i>Tabernaemontana divaricata</i> (L.) R.Br.	Apocynaceae	Tagar, Chandni	Shrub
183.	<i>Tamarindus indica</i> L.	Fabaceae	Khati Amlı	Tree
184.	<i>Tamarix aphylla</i>	Tamaricaceae		Tree
185.	<i>tamarix chinensis</i>	Tamaricaceae		Tree
186.	<i>Tamarix ericodes</i> Rottl	Tamaricaceae		
187.	<i>Tecoma stans</i> (L.) H.B. & K.	Bignoniaceae	Pili Limbdi	Shrub
188.	<i>Tectona grandis</i> L.f.	Verbenaceae	Sag, Teak	Tree
189.	<i>Terminalia arjuna</i> (Roxb.) W. & A.	Combretaceae	Arjun Sadad	Tree
190.	<i>Terminalia catappa</i> L.	Combretaceae	Badam	Tree
191.	<i>Thespesia populnea</i> (L.) Sol.ex Corr	Malvaceae	Paras Piplo	Tree
192.	<i>Thevetia peruviana</i> (Pers.) Merill.	Apocynaceae	Pili Karen	Shrub
193.	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook.f.	Menispermaceae	Galo	Climber
194.	<i>Trachyspermum ammi</i> (L.) Sprague	Apiaceae	Ajmo	Herb
195.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Gokhru	Shrub

196.	<i>Trichodesma amplexicaule</i> Roth.	Boraginaceae	Undhafati	Herb
197.	<i>Trichodesma zeylanicum</i>	Boraginaceae		Herb
198.	<i>Tridax procumbens</i> L.	Asteraceae	Bhangro	Herb
199.	<i>Trigonella foenum -</i> <i>graecum</i> L.	Fabaceae	Methi	Herb
200.	<i>Triticum aestivum</i> L.	Poaceae	Ghau	Graas
201.	<i>Vigna angularis</i> (Willd.) Ohwi & Ohashi	Fabaceae	Mung	Herb
202.	<i>Vitex negundo</i> L.	Verbenaceae	Nagod	Tree
203.	<i>Withania somnifera</i> (L.) Dunal.	Solanaceae	Ashvagandha	Shrub
204.	<i>Xanthium strumarium</i> L.	Asteraceae	Gadariyu, Gokhru	Herb
205.	<i>Zizyphus mauritiana</i> Lam.	Rhamnaceae	Bor	Tree
206.	<i>Zizyphus nummularia</i> (Burm.f.) W. & A.	Rhamnaceae	Chani Bor	Tree
207.	<i>Zygophyllum simplex</i>	Zygophyllaceae		Herb

Conclusion:

To conclude that, the present study has a significant contribution towards understanding of flora of Sami taluka in Patan district, Gujarat, India. During the winter season, the study discovered 207 species of flowering plants belonging to 171 genera and 67 families.

The papers on the Fabaceae family contain the most species. Amaranthaceae, Apocynaceae, Fabaceae, Poaceae, and Solanaceae are the five families with the most species. Out of which 71 trees, 63 herbs, 40 shrubs, 15 grasses, 18 climbers and are present as different habit of plants. Study reveals 88 percent Dicot, 10 percent Monocot, and 2 percent of Gymnosperms. The Fabaceae family has the most species, with 16 species. This study show that Tree species of plants are dominating in the Sami taluka and its surrounding areas. About 12 species have been listed as invasive species. Students, instructors, naturalists, conservationists, and others interested in the topic of diversity research would benefit from this research. It's also a good idea to go through the Flora of Gujarat.

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Photoplates:



Passiflora fortida L.



Tamarix ericodes Rottl



Calotropis procera (Ait)R.Br.



Crotalaria burhia

Phylla nudiflora

Cistanche tubulosa

Aeluropus lagopoides

Vittadinia gracilis



Trachyspermum ammi (L.)



Medicago sativa L.



Allium cepa L.



Trichodesma amplexicaule Roth.



Digera muricata (L.)



Cicer arietinum L.



Clerodendrum inerme (L.) Gaertn.



Pergularia daemia (Forsk.)



Asphodelus tenuifolius Cav.



Heliotropium Curassavicum



Cyamopsis tetragonoloba



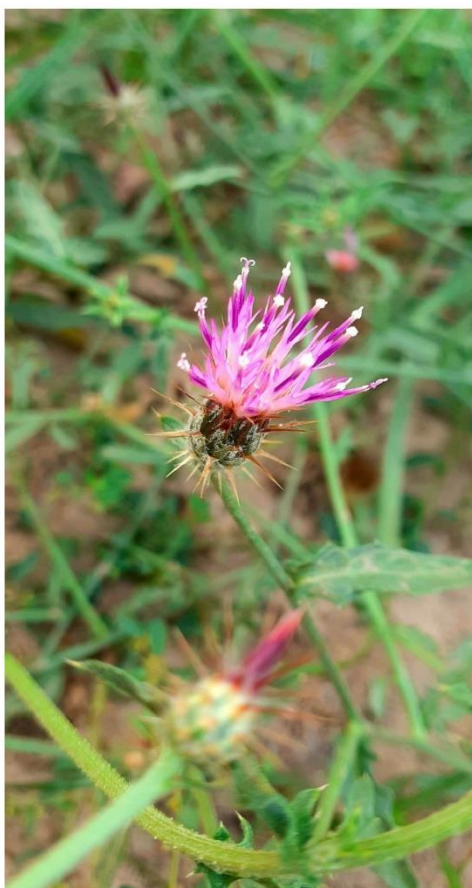
Pulicariya sp.



Moringa oleifera L.



Canna indica L.



Centaurea calcitrapa



Chloris virgata



Banas River



Field visit in Little Run of Kutch



Field visit in Farm



Little Rann of Kutchh



Little Rann of Kutchh



Vadilal Dam Camp site Koddha



Vadilal Dam Camp site Koddha



Godhana ni vid



Sandy soil of Dhadhana village



Pond of Daudpur Village



Barren Land of Mandvi Village