



## A Review on Botanical Gardens Plants in Ahmedabad City, Gujarat, India

### KEYWORDS

Botanical Gardens, Plants, Ahmedabad city, Gujarat state.

### Dr. Mukesh M. Patel

Assistant Professor in Botany, Department of Biology, Government Science College, Sector-15, Gandhinagar, Gujarat, India

**ABSTRACT** Ahmedabad is situated in Central Gujarat, it is a largest city of Gujarat state located on Sabarmati river. The Floral diversity is highly diversified in vegetation and has rich number of floristic composition due to topography, climate and edaphic factors which are favourable for such luxurious vegetation. Apart from the much needed afforestation, there is an imperative need for growing as many plants as possible, whether economical or ornamental, in home garden in parks and other public gardens and in wastelands, riverbanks to restore the environment's natural balance to save the mankind from the impending catastrophe. Present paper deals with the botanically important plants situated in different botanical gardens of Ahmedabad city. During the present study 125 plant species (107 Dicots, 18 Monocots), 107 genera (89 Dicots, 18 Monocots) and 48 families (39 Dicots, 9 Monocots) have been recorded from different botanical gardens of Ahmedabad city.

### Introduction:

Ahmedabad is situated in Central Gujarat; it is a largest city of Gujarat state. It lies between 22°55' 35°36' and 23°07' 51°44' North latitude and 72°28' 41°95' and 72°41' 19°59' East longitudes.

The Ahmedabad municipal corporation declared the city as megacity and built up Sardar Patel ring road on periphery of the city. Except the peripheral agricultural land, rest part is the city area. It covers 10,000 square kilometer and circumference of the Sardar Patel ring road is 70 kilometer.

Saxton and Sedgwick (1918 and 1922) studied the plants of North Gujarat. Sutaria (1958), Gandhi (1958), Vaidya and Vora (1964), Vaidya (1967), Pandya (1972), Patel (2010) carried out Floristic study in Ahmedabad. The present paper is there for based on fresh field work carried out during the year 2015 with a few frequent observations in different Botanical Gardens in Ahmedabad city and its vicinity.

### Methodology

#### Field work

The result embodied in this work based on study and collections during 2014 to 2015 through well planned explorations in these areas. Number of extensive explorations of 10-20 days duration each, were made in different Botanical gardens of Ahmedabad city with emphasis on botanically important plant species with reference to studying the subject as per the syllabus. Field work was carried out throughout the year in all seasons. During collection trips plants were collected in different developmental stages and exhaustive field notes were taken. Different characters such as, habit, habitat, abundance, color and fragrance of the flower, etc. were noted in the field diary from time to time. The help of Floristic key of Cooke (1908) and Shah (1978) Bose and Chowdhury (2005).

### Observation:

For the study and conservational aspects following botanical gardens are taken as a working area:

1. Gujarat College, Ellisbridge
2. L. M. Pharmacy College (Medicinal Plants), Navrangpura
3. M. G. Science Institute, Navrangpura

4. Medicinal Plant Park, Gujarat University
5. Ayurvedic Udhyan, Paldi
6. Sarabhai Botanical Garden, Shahibag
7. Van Chetna Kendra, Vastrapur

### Following floristic list is recorded in different botanical gardens of Ahmedabad city:

	Family	Botanical Names
1	RANUNCULACEAE	
		1 Clematis triloba Heyne.
2	ANNONACEAE	
		2 Annona reticulata L.
		3 Annona muricata L.
		4 Artabotrys hexapetalus(L.f) Bhandari
3	BIXACEAE	
		5 Bixa orellana L.
4	CLUSIACEAE	
	(GUTTIFERAE)	6 Calophyllum inophyllum L
		7 Garcinia indica Choiss.
		8 Mesua ferra L.
5	MALVACEAE	
		9 Kydia calycina Roxb.
		10 Malva parviflora L.
		11 Thespesia populnea (L.)
6	BOMBACACEAE	
		12 Adansonia digitata L.
		13 Ceiba pentandra Gaertn.
7	STERCULIACEAE	
		14 Dombeya acutangula L.

		15	Guzuma ulmifolia Lam.
		16	Helicteres isora L.
		17	Pterospermum acerifolium Willd.
		18	Pterospermum suberifolium Lam.
		19	Sterculia foetida L.
		20	Sterculia urens Roxb.
8	MALPHIGI-ACEAE		
		21	Hiptage benghalensis (L.) Kurtz.
		22	Malpighia glabra L.
9	ZYGOPHYLL-ACEAE		
		23	Guaiacum officinale L.
10	RUTACEAE		
		24	Citrus reticulata Blanco.
		25	Citrus sinensis Osbek.
		26	Triphasia aurantiola Lour.
11	BURSARACEAE		
		27	Commiphora wightii (Arn.) Bhandari
12	MELIACEAE		
		28	Heynea trijuga Roxb.
		29	Melia azedarach L.
		30	Swietenia mahagoni L.
13	AMPELIDACEAE		
		31	Cissus rependa Vahl.
14	SAPINDACEAE		
		32	Dodonaea viscosa (L.) Jacq.
15	ANACARDI-ACEAE		
		33	Anacardium occidentale L.
		34	Buchanania lanzan Spreng.
		35	Semecarpus anacardium L.
16	FABACEAE		
		36	Dalbergia latifolia Roxb.
		37	Dalbergia sissoo Roxb.
		38	Ougeinia oojeinensis (Roxb.) Hochreut
		39	Pterocarpus marsupium Roxb.
17	CAESALPINI-ACEAE		
		40	Bauhinia acuminata L.
		41	Bauhinia purpurea L.
		42	Bauhinia variegata
		43	Caesalpinia coriaria Willd.
		44	Cassia grandis L. f.
		45	Hardwickia binata Roxb.

		46	Saraca asoca ( Roxb.)De
18	MIMOSACEAE		
		47	Acacia chundra (Roxb. ex. Rott.) Willd.
		48	Acacia sinuata(Lour.) Merr.
		49	Adenantha pavonina L.
		50	Mimosa pudica L.
		51	Parkia biglandulosa Wight. & Arn.
19	COMBRETACEAE		
		52	Anogeissus latifolia (Roxb.)
		53	Combretum coccineum Lam.
		54	Combretum macrophyllum Wall.
		55	Terminalia bellirica (Gaerth.) Roxb.
		56	Terminalia chebula Retz.
		57	Terminalia crenulata Roth.
20	MYRTACEAE		
		58	Barringtonia racemosa Roxb.
		59	Melaleuca leucadendron L.
		60	Syzygium hyneanum Wall
		61	Syzygium malaccensis Merrt
21	LECYTHIDACEAE		
		62	Careya arborea Roxb.
		63	Courpita guinanensis Aubl.
22	LYTHRACEAE		
		64	Lagerstroemia indica L
		65	Lagerstroemia parviflora Roxb.
		66	Lagerstroemia speciosa (L.) Pers
23	RUBIACEAE		
		67	Adina cordifolia (Roxb.) Bth
		68	Anthocephalus indicus A.
		69	Gardenia turgida Roxb
		70	Mitragyna parvifolia (Roxb.) Konth
		71	Morinda citrifolia L.
		72	Xeromphis spinosa (Thumb.) Keay
24	THEOPHRASTACEAE		
		73	Jacquinia ruscifolia Jacq.
25	EBENACEAE		
		74	Diospyros peregriana (Gaertn.) Guerke.
26	APOCYNACEAE		
		75	Holarrhena antidysenterica (L.) Wall
		76	Rauwolfia tetraphylla L
		77	Rauwolfia serpentina Benth.

		78	<i>Strophanthus wallichii</i> A. DC.
		79	<i>Wrightia tinctoria</i> R. Br.
27	ASCLEPIADACEAE		
		80	<i>Gymnema sylvestre</i> (Retz.) Shult.
		81	<i>Tylophora indica</i> (Brum. f.) Merr.
28	PERIPLOCAEAE		
		82	<i>Hemidesmus indicus</i> (L.) R. Br.
29	CONVOLVULACEAE		
		83	<i>Arygyreia nervosa</i> (Burm. f.) Boj.
30	BIGNONIACEAE		
		84	<i>Bignonia unguis-cati</i> L.
		85	<i>Crescentia cujete</i> L.
		86	<i>Haplophragma adenophyllum</i> (Wall.) P. Dop
		87	<i>Jacaranda mimosifolia</i> D. Don
		88	<i>Millingtonia hortensis</i> L.
		89	<i>Oroxylum indicum</i> (L.) Vent.
		90	<i>Spathodea campanulata</i> Beauv.
31	ACANTHACEAE		
		91	<i>Andrographis paniculata</i> (Burm. f.) Wall
32	VERBENACEAE		
		92	<i>Clerodendrum macrosiphon</i> W.Piep.
		93	<i>Gmelina arborea</i> Roxb.
		94	<i>Tectona grandis</i> L.f.
33	POLYGONACEAE		
		95	<i>Coccoloba pubescens</i> , L
		96	<i>Muelhenbeckia platclados</i> Meissn.
34	ARISTOLOCHIACEAE		
		97	<i>Aristolochia elegans</i> Mast.
35	PIPERACEAE		
		98	<i>Piper betle</i> L.
		99	<i>Piper longum</i> L.
		100	<i>Piper nigrum</i> L.
36	LAURACEAE		
		101	<i>Cinnamomum tamala</i> Ness.
37	SANTALACEAE		
		102	<i>Santalum album</i> L.
38	EUPHORBIACEAE		
		103	<i>Cicca acida</i> (L.) Merr.
		104	<i>Drypetes roxburghii</i> (Wall.) Hurus
39	MORACEAE		

		105	<i>Artocarpus heterophyllus</i> Lam.
		106	<i>Ficus carica</i> L.
		107	<i>Ficus krishanae</i> C de C.
40	ZINGIBERACEAE		
		108	<i>Costus speciosus</i> (Koenig) Sm.
		109	<i>Elettaria cardamomum</i> Mat.
		110	<i>Hedychium spiketum</i> Ham ex Smith.
		111	<i>Zingiber officinale</i> L.
41	MUSACEAE		
		112	<i>Ravenala madagascariensis</i> Sonnert
42	HELICONIACEAE		
		113	<i>Heliconia angustifolia</i> Hook.
43	LILIACEAE		
		114	<i>Chlorophytum borivilianum</i> Sant.
44	SMILACACEAE		
		115	<i>Smilax zeylanica</i> L.
45	COMMELIACEAE		
		116	<i>Rhoeo spathacea</i> (Sw.) Stearnn.
46	ARECACEAE		
		117	<i>Areca catechu</i> L.
		118	<i>Borassus flabellifer</i> L.
		119	<i>Calamus rotang</i> L.
		120	<i>Hyphaene indica</i> Becc.
		121	<i>Phoenix dactylifera</i> Roxb.
47	PANDANACEAE		
		122	<i>Pandanus odoratissimus</i> L.f.
48	POACEAE		
		123	<i>Bambusa vulgaris</i> var. <i>stricta</i> Gamble.
		124	<i>Cymbopogon citratus</i> (DC.) Stapf.
		125	<i>Dendrocalamus strictus</i> Ness.

### Result and Discussion:

The present study shows that 125 plant species (107 Dicots, 18 Monocots), 107 genera (89 Dicots, 18 Monocots) and 48 families (39 Dicots, 9 Monocots) have been recorded from different Botanical gardens. Few plants species are considered as very important in case of Threatened category like *Guaiaecum officinale* L., *Triphasia aurantiola* Lour., *Commiphora wightii* (Arn.) Bhandari, *Caesalpinia coriaria* Willd., *Adenantha pavonina* L., *Melaleuca leucadendron* L., *Jacquinia ruscifolia* Jacq., *Strophanthus wallichii* A. DC., *Oroxylum indicum* (L.) Vent., *Chlorophytum borivilianum* Sant. and *Hyphaene indica* Becc.

### Acknowledgment:

Author is highly thankful to Dr. N. A. Patel, Head of Biology Department, Gujarat Arts & Science College, Ahmedabad for their critical suggestions, valuable remarks, co-operation and unconditional support during the period of research study.

**References:**

1. **Bose, T. K., Chowdhary, B., Sharma, S. P. (2005).** *Tropical garden plants.*
2. **Cooke T.H. (1903).** *The Flora of the Presidency of Bombay* Vol. I-II, Revised Edition Bishen Singh Mahendra Pal Singh, Calcutta.
3. **Gandhi, H. P. (1958).** A list of flowering plants (angiosperms) of Ahmedabad and its immediate Vicinity *J. Guj. Univ.* 2,114-156.
4. **Pandya, S.M. (1972).** Flowering plants of the Gujarat University campus and its surrounding (Ahmedabad). *Vidya Jour. Guj. Uni.* XII B, 21-48.
5. **Patel, N.A. (2010).** Floristic diversity of the Ahmedabad city, Ph.D. Thesis, Kachchh University, Bhuj
6. **Saxton, W.T. and Sedgwick, L.J. (1918-1922).** *Plants of Northern Gujarat.* 6:209-323, 1918, 9:251-262, 1922.
7. **Shah, G.L. (1978).** *Flora of Gujarat State* Part I & II Sardar Patel University, Vallabh Vidhyanagar .1074.
8. **Sutaria, R.N. (1958).** *A Text Book of Systemic Botany,* Publications, Khadayta Book Depot, Ahmedabad. 1-414.
9. **Vaidya, B.S. (1967).** *Flora of Ahmedabad* Gujarat University, Ahmedabad.
10. **Vaidya, B.S. and Vora, A.B. (1964).** Some new records for Ahmedabad, *J. Guj. Univ.* 7,193-196.