

Checklist of tree diversity of Mahaveer garden in the Kolhapur city (MS)

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Abstract: *In the historical city Kolhapur there are 53 public gardens under the control of Kolhapur Municipal Corporation. In the centre of city a historical and biodiversity rich Mahaveer garden is situated. The documentation of tree diversity of Mahaveer garden was made. Total 62 tree species under 53 genera belonging to 28 families have been reported from this garden. Our study reveals that dicot trees are dominating as compared with monocots and gymnosperms. Checklist of trees and their analysis is discussed in the present study.*

Keywords: *Mahaveer garden, trees, checklist.*

I. INTRODUCTION

Plants play a vital and important role for every organism on this planet. They act as a lifeline and backbone of the surrounding environment. Gardens are the places for recreation and relaxation. Gardens can make a significant positive contribution to biodiversity in urban environments and the delivery of ecosystem services. The public health benefits of gardens have been well described, in terms of improved mental health and well-being, increased physical activity and a source of healthy homegrown nutrition (Chalmin-Pui *et al.*, 2021; de Bell *et al.*, 2020; Soga *et al.*, 2017, Richard *et al.*, 2023). According to Schram-Bijkerk *et al.*, (2018) gardens have also been identified as an important force for social cohesion.

Every human being must know their green wealth of the city. We made a tree survey of Mahaveer garden which is the second biggest garden in the city. Trees are important to humankind not only economically, environmentally and industrially but also spiritually, historically and aesthetically, for they sustain human life through direct and indirect gains by providing a wide range of products for survival and prosperity (Seth, 2003). Recently Aitawade and Deshmukh (2025) have discussed different threats to the tree diversity in gardens in the Kolhapur city.

II. STUDY AREA

Kolhapur is one of the important and heritage-rich cities of South Maharashtra, India. Mahaveer garden is situated in the heart of the city near Collector office, Udyog Bhavan, New Shahupuri, Kolhapur (16.707° N and 74.232° E). It covers about 11.7 acres area.

III. METHODOLOGY

The survey of tree species of Mahaveer garden was planned systematically. The survey was made thoroughly and all tree species were documented, listed and photographed. The tree species were identified with the help of Flora of Kolhapur District by Yadav & Sardesai (2002). Photographs were taken with the help of a mobile camera. The botanical names of the tree species have been recorded as per POWO (Plants of the World Online; <https://powo.science.kew.org>).



IV. RESULTS AND DISCUSSIONS

Gardens are considered essential part of any urban landscape. The Mahaveer garden is one of the oldest and biggest public garden in the Kolhapur city, has preserved a variety of rare trees. Along Jayanti nala Mahaveer gardens are situated which support different microhabitats. Rapid growth of city without green places and many anthropogenic activities are exerting pressure on the existing limited garden habitats. Following tree species are reported from Mahaveer garden.

Checklist of tree species in Mahaveer Garden:

No.	Botanical Name	Family	Common Name
1	<i>Mangifera indica</i> L.	Anacardiaceae	Amba / Mango
2	<i>Annona reticulata</i>	Annonaceae	Ramfal
3	<i>Cananga odorata</i> (Lam.) Hook.f. & Thomson	Annonaceae	Yang Yang Tree
4	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Annonaceae	Ashok
5	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	Satwin
6	<i>Alstonia macrophylla</i> Wall. ex G.Don	Apocynaceae	Satwin
7	<i>Plumeria alba</i> L.	Apocynaceae	Devchafa
8	<i>Tabebuia aurea</i> (Silva Manso) Benth. & Hook.f. ex S.Moore	Apocynaceae	Caribbean trumpet tree
9	<i>Tabebuia rosea</i> (Bertol.) Bertero ex A.DC.	Apocynaceae	Rosy trumpet tree
10	<i>Dypsis lutescens</i> (H.Wendl.) Beentje & J.Dransf.	Aracaceae**	Areca palm
11	<i>Roystonea regia</i> (Kunth) O.F.Cook	Aracaceae**	Bottle Palm
12	<i>Jacaranda acutifolia</i> Bonpl.	Bignoniaceae	Nilmohar
13	<i>Kigelia africana</i> (Lam.) Benth.	Bignoniaceae	Sausage Tree
14	<i>Markhamia lutea</i> (Benth.) K.Schum.	Bignoniaceae	Siala tree
15	<i>Spathodea campanulata</i> P. Beauv.	Bignoniaceae	Pichakari
16	<i>Cordia dichotoma</i> G.Forst.	Boraginaceae	Bhokar
17	<i>Bauhinia purpurea</i> L.	Caesalpiniaceae	Kanchan
18	<i>Cassia fistula</i> L.	Caesalpiniaceae	Bahava / Golden Shower
19	<i>Cassia javanica</i> L.	Caesalpiniaceae	Burmese Pink Cassia
20	<i>Cassia siamea</i> Lam.	Caesalpiniaceae	Kashid
21	<i>Delonix regia</i> (Hook.) Raf.	Caesalpiniaceae	Gulmohar
21	<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	Caesalpiniaceae	Pitmohar/ Copper pod tree
22	<i>Saraca asoca</i> (Roxb.) Willd.	Caesalpiniaceae	Sita Ashok
23	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Chinch
24	<i>Carica papaya</i> L.	Caricaceae	Papaya
25	<i>Casuarina equisetifolia</i> L.	Casuarinaceae	Suru
26	<i>Calophyllum inophyllum</i> L.	Clusiaceae	Undi
27	<i>Terminalia catappa</i> L.	Combretaceae	Khota Badam
28	<i>Terminalia cuneata</i> Roth	Combretaceae	Arjun
29	<i>Terminalia mantaly</i> H.Perrier	Combretaceae	Mantle Terminalaia
30	<i>Cycas sp.</i>	Cycadaceae*	Sago palm
31	<i>Dillenia indica</i> L.	Dilleniaceae	Karamal
32	<i>Drypetes roxburghii</i> (Wall.) Hurus.	Euphorbiaceae	Putrajivi
33	<i>Erythrina stricta</i>	Fabaceae	Ranpangara
34	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Palas / Flame of Forest
35	<i>Gliricidia sepium</i> (Jacq.) Walp.	Fabaceae	Giripushp/Undirmari



36	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	Karanj
37	<i>Couroupita guianensis</i> Aubl.	Lecythidaceae	Kailaspati / Cannonball Tree
38	<i>Lagerstroemia reginae</i> Roxb.	Lythraceae	Tamhan / Jarul
39	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Kadunimb
40	<i>Swietenia macrophylla</i> King	Meliaceae	Mahogani
41	<i>Acacia longifolia</i> (Andrews) Willd.	Mimosaceae	Australian Babhul
42	<i>Acacia nilotica</i> (L.) Delile	Mimosaceae	Babhul
43	<i>Albizia lebbek</i> (L.) Benth.	Mimosaceae	Shirish
44	<i>Leucaena latisiliqua</i> (L.) Gillis & Stearn	Mimosaceae	Subabhul
45	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Mimosaceae	Vilayati Chinch
46	<i>Samanea saman</i> (Jacq.) Merr.	Mimosaceae	Parjany Vruksh / Rain Tree
47	<i>Ficus elastica</i> Roxb. ex Hornem.	Moraceae	Rabar
48	<i>Ficus hispida</i> L.f.	Moraceae	Dhed Umbar / Karavati
49	<i>Ficus racemosa</i> L.	Moraceae	Umbar
50	<i>Morus alba</i> L.	Moraceae	Tutu/ Mulberry
51	<i>Callistemon citrinus</i> (Curtis) Skeels	Myrtaceae	Bottlebrush
52	<i>Psidium guajava</i> L.	Myrtaceae	Peru / Guava
53	<i>Grevillea robusta</i> A.Cunn. ex R.Br.	Proteaceae	Silver Oak
54	<i>Ixora sp.</i>	Rubiaceae	-
55	<i>Mitragyna parvifolia</i> (Roxb.) Korth.	Rubiaceae	Kadam
56	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	Rubiaceae	Kadamb
57	<i>Santalum album</i> L.	Santalaceae	Chandan
58	<i>Sapindus laurifolius</i> Vahl.	Sapindaceae	Ritha
59	<i>Mimusops elengi</i> L.	Sapotaceae	Bakul
60	<i>Guazuma ulmifolia</i> Lam.	Sterculiaceae	Bhadraksh
61	<i>Ravenala madagascariensis</i> Sonn.	Strelitziaceae	Travelers Palm

*** Gymnosperms, ** Monocot**

Among all the tree diversity dicots are dominating while monocots and gymnosperms are very few in number. In the family Caesalpiniaceae maximum tree species are found *i.e.* 8 followed by Mimosaceae *i.e.* 6 then Apocynaceae *i.e.* 5 and so on (Fig. 1). Monocots represented by only single family with two tree species while Gymnosperms are represented by only single family with single tree species.



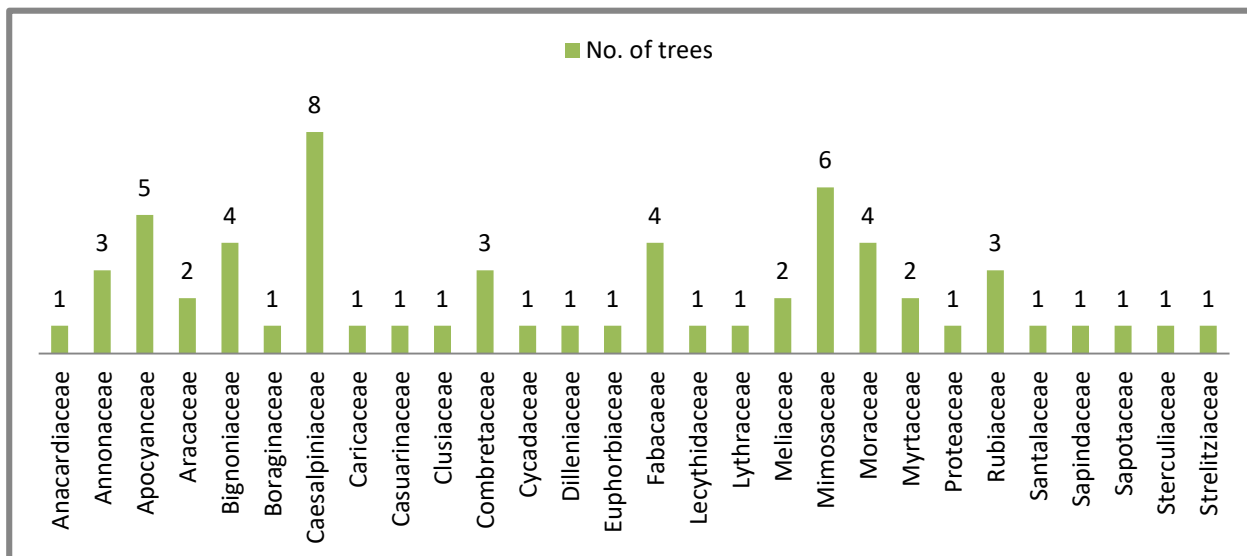


Fig.1: Number of tree species in the respective family

In our survey of trees in the Mahaveer garden clearly indicates exotic species are more in number as compared with indigenous species. Most of them are evergreen and planted especially for their flowers, foliage and fruits. We recommend the plantation of RET species in the Mahaveer garden wherever place is available to fulfill the purpose of conservation. There is need to introduce some monocots and gymnosperms especially palms which will enhance the beauty as well species richness of garden.

Our efforts in the form of this manuscript will be useful for the researchers, conservators and policymakers who are continuously working for conservation of tree species, to understand different aspects of biodiversity and maintenance of healthy ecosystems.

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