

Study of angiospermic wall flora of city Rewa (M.P.) India

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Abstract

The angiospermic wall flora was represented by 69 plants species belonging to 59 genera of 28 families out of which 25 were represented by dicotyledonous families while only 03 were represented by monocotyledonous families. Asteraceae, Poaceae and Malvaceae were dominant families of the angiospermic wall flora of city Rewa. Majority of the non woody wall flora appear in the rainy and winter seasons of the year. Among the woody perennials *Azadirachta indica*, *Ficus benghalensis* and *Ficus religiosa* were the most common wall flora of city Rewa.

Keywords: Wall flora, Seasonal appearance, Woody perennials, Herbaceous habit, Undershrub

1. Introduction

Walls are manmade artificial habitats. Generally the walls having cracks and crevices support the growth and development of plant species. The wall plants are the result of spontaneous colonization unassisted by human action (Singh, 2011) ^[1]. Several studies have been conducted to analyze the floristic composition of the wall habitats in India and abroad. Walls may be generally classified into five types which are (01) brick cement wall, (02) stone cement wall, (03) brick mud wall, (04) stone mud wall and (05) mud wall. In the brick cement wall and stone cement wall the cementing material used is cement while in brick mud wall and stone mud wall the cementing material used is mud. The mud wall is purely made up of mud (Singh, 2011 and Varshney, 1967) ^[2, 3]. All the five types of walls are available at city Rewa. This city has several old constructions with walls developing cracks and crevices with passage of time. The cracks and crevices in the wall provide anchorage to the plant roots thus supporting the growth of the plants (Varshney, 1971, Singh *et al.* 1971 and Sahu, 1984) ^[4, 5, 6]. The objectives of the study were to analyze the seasonal appearance of angiospermic flora on the walls of all the present constructions of the city Rewa.

2. Materials and Methods

The Rewa district is located between 81-15. East longitude and 24-42 North latitude and is situated on the Vindhya Plateau at the height of 318 m above MSL.

An extensive field survey was conducted from July 2016 to July 2018 to record the angiospermic flora growing on the walls in different parts of the city. One visit was made after every two months. Thus a total of six visits were made for the field observations in a year. During the process of observation visits were made to all the practically possible

places in search of angiospermic wall flora. The walls investigated for the flora included the main boundary walls surrounding the schools, colleges, hospitals, central jail, motor garages, government staff quarters, Rewa fort etc. the identification of plant species was done using taxonomic literatures and with the help of experts (Singh, 2011 and Varshney, 1971) ^[1, 4].

3. Result and Discussion

The angiospermic wall flora of the city Rewa along with their habit and seasonal appearance is depicted in the Table 01. On the basis of this study it becomes clear that angiospermic wall flora was represented by 69 plants species belonging to 59 genera of 28 families out of which 25 were represented by dicotyledonous families while only 03 were represented by monocotyledonous families. Of the total angiospermic flora recorded the maximum number of species that is 11 (15.94%) belongs to family Asteraceae, 07 (10.14%) to family Poaceae whereas 05 (7.25%) species were represented by family Malvaceae. Thus the study reveals that Asteraceae, Poaceae and Amaranthaceae are the dominant families of angiospermic wall flora city Rewa. It was also observed that members of families Asteraceae, Fabaceae, Lamiaceae and Acanthaceae colonize the walls in winter season whereas the members of families Poaceae, Cyperaceae, Euphorbiaceae and Malvaceae colonize the walls in rainy season. Contrary to these members of family Amaranthaceae colonize the walls in summer season. Based on habit, of the total plant species observed 56 (81.15%) were represented by herbs, 05 (7.25%) by trees, 06 (8.70%) by Undershrub and only 02 (2.90%) by shrubs (Figure 01). Thus it becomes clear that plants of herbaceous habits are the chief representatives of the angiospermic wall flora of city Rewa.



Fig 1: Graphics analysis of angiospermic wall flora of Rewa city.

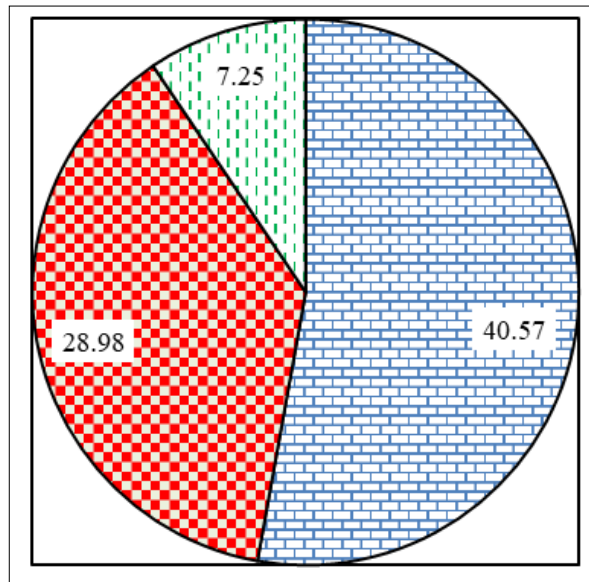


Fig 2

In the study 28(40.57%), 20(28.98%) and 05(7.25%) plant species were recorded in rainy, winter and summer seasons respectively on the walls of city Rewa. However 09(13.04%) plant species were recorded throughout the

year. Furthermore 07(10.14%) plant species were observed during both rainy and winter seasons (Figure 02). Thus it is evident from the study that most of the angiospermic flora colonizes the walls during rainy and winter seasons.

Table 1: List of angiospermic wall flora of city Rewa (M.P.) India

S. No.	Plant species	Family	Habit	Seasonal appearance
1.	<i>Abutilon indicum</i>	Malvaceae	Herb	Rainy
2.	<i>Acalypha indica</i>	Euphorbiaceae	Herb	Rainy
3.	<i>Achyranthes aspera</i>	Amaranthaceae	Herb	Whole year
4.	<i>Ageratum conyzoides</i>	Asteraceae	Herb	Summer
6.	<i>Alternanthera sessilis</i>	Amaranthaceae	Herb	Rainy & Winter
8.	<i>Amaranthus polygamus</i>	Amaranthaceae	Herb	Summer
7.	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb	Rainy & Winter
5.	<i>Anagallis arvensis</i>	Primulaceae	Herb	Winter
9.	<i>Argemone mexicana</i>	Papaveraceae	Herb	Winter
11.	<i>Azadirachta indica</i>	Meliaceae	Tree	Whole year
12.	<i>Blumea aromatica</i>	Asteraceae	Herb	Rainy
13.	<i>Blumea oxyodonta</i>	Asteraceae	Herb	Rainy
15.	<i>Boerhavia diffusa</i>	Nyctaginaceae	Herb	Rainy & Winter
20.	<i>Brachiaria ramosa</i>	Poaceae	Herb	Rainy
10.	<i>Calotropis procera</i>	Asclepiadaceae	Shrub	Whole year

18.	<i>Cassia tora</i>	Fabaceae	Herb	Rainy
14.	<i>Chenopodium album</i>	Chenopodiaceae	Herb	Winter
16.	<i>Cleome viscosa</i>	Cappardaceae	Herb	Rainy
17.	<i>Coccinia grandis</i>	Cucurbitaceae	Herb	Winter
19.	<i>Commelina benghalensis</i>	Commelinaceae	Herb	Rainy
21.	<i>Cynodon dactylon</i>	Poaceae	Herb	Whole year
22.	<i>Cyperus difformis</i>	Cyperaceae	Herb	Rainy
23.	<i>Cyperus iria</i>	Cyperaceae	Herb	Rainy
24.	<i>Datura innoxia</i>	Solanaceae	Herb	Rainy
25.	<i>Datura metel</i>	Solanaceae	Undershrub	Rainy
26.	<i>Dichanthium amulatum</i>	Poaceae	Herb	Rainy
27.	<i>Digitaria marginata</i>	Poaceae	Herb	Rainy
28.	<i>Eclipta alba</i>	Asteraceae	Herb	Rainy
29.	<i>Eleusine indica</i>	Poaceae	Herb	Summer
30.	<i>Eragrostis tenella</i>	Poaceae	Herb	Rainy
31.	<i>Euphorbia heterophylla</i>	Euphorbiaceae	Herb	Rainy & Winter
32.	<i>Euphorbia hirta</i>	Euphorbiaceae	Herb	Rainy & Winter
33.	<i>Evolvulus nummularius</i>	Convolvulaceae	Herb	Rainy
34.	<i>Ficus benghalensis</i>	Moraceae	Tree	Whole year
35.	<i>Ficus glomerata</i>	Moraceae	Tree	Whole year
36.	<i>Ficus racemosa</i>	Moraceae	Tree	Whole year
37.	<i>Ficus religiosa</i>	Moraceae	Tree	Whole year
38.	<i>Heliotropium indicum</i>	Boraginaceae	Herb	Winter
39.	<i>Justicia diffusa</i>	Acanthaceae	Herb	Winter
40.	<i>Lantana camara</i>	Verbenaceae	Shrub	Whole year
41.	<i>Launaea nudicaulis</i>	Asteraceae	Herb	Winter
42.	<i>Lindenbergia indica</i>	Scrophulariaceae	Herb	Rainy
43.	<i>Lindernia ciliata</i>	Scrophulariaceae	Herb	Rainy
44.	<i>Malvastrum tricuspidatum</i>	Malvaceae	Undershrub	Rainy
45.	<i>Melilotus alba</i>	Fabaceae	Herb	Winter
46.	<i>Mimosa pudica</i>	Fabaceae	Undershrub	Winter
47.	<i>Nepeta ruderalis</i>	Lamiaceae	Herb	Winter
48.	<i>Nicotiana plumbaginifolia</i>	Solanaceae	Herb	Winter
49.	<i>Oldenlandia corymbosa</i>	Rubiaceae	Herb	Winter
50.	<i>Oldenlandia dichotoma</i>	Rubiaceae	Herb	Winter
52.	<i>Oxalis corniculata</i>	Oxalidaceae	Herb	Rainy & Winter
54.	<i>Panicum psilopodium</i>	Poaceae	Herb	Rainy
55.	<i>Parthenium hysterophorus</i>	Asteraceae	Herb	Rainy
57.	<i>Peristrophe bicalyculata</i>	Acanthaceae	Herb	Winter
58.	<i>Phyllanthus niruri</i>	Euphorbiaceae	Herb	Rainy & Winter
56.	<i>Rumex nigricans</i>	Polygonaceae	Herb	Rainy
53.	<i>Rungia parviflora</i>	Acanthaceae	Herb	Winter
51.	<i>Salvia plebeia</i>	Lamiaceae	Herb	Winter
59.	<i>Scoparia dulcis</i>	Scrophulariaceae	Herb	Summer
60.	<i>Sida acuta</i>	Malvaceae	Undershrub	Rainy
61.	<i>Sida rhombifolia</i>	Malvaceae	Undershrub	Rainy
62.	<i>Solanum nigrum</i>	Solanaceae	Herb	Winter
63.	<i>Sonchus arvensis</i>	Asteraceae	Herb	Winter
64.	<i>Spilanthes acmella</i>	Asteraceae	Herb	Winter
66.	<i>Trianthema portulacastrum</i>	Aizoaceae	Herb	Rainy
65.	<i>Tridax procumbens</i>	Asteraceae	Herb	Summer
67.	<i>Urena lobata</i>	Malvaceae	Undershrub	Rainy
68.	<i>Vernonia cinerea</i>	Asteraceae	Herb	Winter
69.	<i>Xanthium strumarium</i>	Asteraceae	Herb	Rainy

4. Conclusion

It can be concluded from the study that the angiospermic flora on the walls of city Rewa is dominated by herbaceous angiosperms. Most of the flora on walls appears during the rainy and winter seasons of the year. The Asteraceae, Poaceae and Malvaceae families represented exclusively by herbaceous species dominate the angiospermic wall floristic composition of city Rewa.

5. Acknowledgement

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