



INTERNATIONAL JOURNAL OF PHARMACY & LIFE SCIENCES (Int. J. of Pharm. Life Sci.)

Home gardening plant diversity in relation to remoteness from urban center-Dallirajhara Distt – Balod (C. G.)

Maheshwar Singh Sahu¹ and Sohan Lal Sahu²

1, Department of Botany, Govt.G.S.G.P.G.College, Balod,(C.G.) - India

2, Department of Botany, Govt. Dr.B.S.B.A. P.G.College, Dongargaon, (C,G,) - India

Abstract

Home garden in India have long been important multipurpose agroforestry system that combine ecological and socioeconomic sustainability. They are significant means of ex-situ conservation and a repository of many of the endangered and rare plant. In recent year however increasing urbanization and accompanying removed tree and perennial agroforestry have resulted in the breakdown of these traditional agroforestry system accompanied by increasing economic, culture, nutritional and environment problems particularly in the urban area. Present study documents of home garden plant diversity of urban center Dallirajhara. The survey period conducted during august 2016 to October 2017. In which observe total no. of plant species 168 were identified in homegardening plants. This belongs to 159 angiosperm, 05 gymnosperm, 04 pteridophyta plants. In angiosperm 129 plants (77%) class dicotyledons of 50 family, 30 plants (18%) in monocotyledons of 10 family and 05 plants (3%) in gymnosperm of 04 family, 04 plants (2%) in pteridophyta 02 families. A total number of herb, climber, shrub, tree, hydrophytes and pteridophytes plants were 86, 21, 22, 31, 04 and 04 recorded respectively. This seemed due to remoteness from urban area relative, isolation and consequently little interaction of the forest which side communities and easy availability of plant product near by forest. Although these finding appears to contradict the premise that sustainability forming in such remote area encourage farmers to produce a broad variety of species and therefore remoteness from urban center increase species richness on forms. Study revealed that majority of plants growth by the homegarden owner were cultivated plant however some of them were noted as exotic and endemic plant in this way homegardens are proved to be an effective means of plant conservation.

Key words: Urban diversity, Homegarden, Ex-situ conservation

Introduction

Homegardens are typically populated by a wide variety of plants, varying from small herbs to tall trees. It comprises soil, crop, weed, pathogen and insect sub- systems, which transform solar energy, water, nutrients, labour and other input into food, feed, fuel, fiber and pharmaceuticals.

The concept of urban forestry includes not only aesthetics, but also functions for environmental and socio-economic uplift. Trees in urban areas are very important in view of increasing population, urbanization, pollution levels, and diminishing forest areas. Trees serve many useful purposes, especially in urban areas where they improve air quality (Smith 1980).

In several countries and ecosystems the home garden was where germplasm from the wild was brought under cultivation. This complex ecosystem close to the house where plants can be closely observed and managed makes it a convenient site for traditional plant experimentation and domestication. For some of the root crops such as taro and yams, ruderal material from the wild is continually brought under cultivation in home gardens to renew the vigour of the germplasm for planting in larger fields. Some home garden species that exist in both cultivated and uncultivated forms are also income earners.

HOME GARDENS are traditional agroforestry systems characterized by the complexity of their structure and multiple functions. Homegardens can be defined as 'land use system involving deliberate management of multipurpose trees and shrubs in intimate association with annual and perennial agricultural crops and invariably livestock within the compounds of individual houses.

* Corresponding Author

E.mail: maheshwarsinghsahu04@gmail.com

A home garden is a micro-environment composed of a multi-species (annual to perennial, root crops to climbers etc), multi-storied and multi-purpose garden situated close to the homestead (Quat, NX, 1996; Watson and Eyzaguirre, 2002; Hodgkin, 2002). A home garden refers to the traditional land use system around a homestead, where several species of plants are grown and maintained by the household members and their products are primarily intended for the family consumption. Several terms have been used to describe these garden production systems, such as “homestead garden, backyard garden, kitchen garden, agro forestry, mixed garden, garden culture, etc.” (Helen Keller International, 2001; Mitchell and Hanstad, 2004)

Material and Methods

Study area

The present study was conducted in dallirajhara is a town and a municipality in Balod district in the state of Chhattisgarh India. Dallirajhara is located at 20.58 N 81.08 E. It has an average elevation of 409 M (1342 ft). Dallirajhara is home of Iron are captive mines for Bhilai steel plant. The town is greatly covered of forest area .

Methodology

The present research is carried out during August 2016 to August 2017 in Dallirajhara dist Balod Chhattisgarh India to explore the homegardening plants diversity. The study are divided to 5 parts named as Teacher colony college road, Nirmala sector, Sap rishi Garden , Railway colony Dallirajhara and Armurkasa . The study site is spread at holl town Dallirajhara North, South, East and West. Survey of site was done for collection of home gardening plants herbs , shrubs , trees , climbers , hydrophytes and pteridophytes .after that they were identified by common name , Botanical name and family . Theresearch area was regularly visited for collection and identification of home gardening plants. The photograph of plant taken were identified in the laboratory by literature including flora encyclopedia, De.L.C., Hooker, Sharma R. trivedi P.C. and Pullai T . which was confirmed with the help of field experts. Plants were commonly identify directly interview through local people of Dallirajhara whose

mention own garden in own house. The homegardening data was collected from various gardens and villagers who posses vast knowledge of plants for livelihood security ornamental use, vegetable use and other use of homegardening plants. The firsthand information was recorded at the time of the field visit to the study site. According to planed schedule field work was done. In present study the basic source of information is questionnaire, observation and interview on the spot . The present research paper is an attempt to focus Ex-situ conservation. cultivate and recorded the plants present in Dallirajhara urban area.

Results and Discussion

Home garden plant diversity in relation to remoteness from urban center-Dallirajhara conducted in Balod district, Chhattisgarh, and documented different types of Home gardening plants used by the indigenous peoples. The study was focused Home gardening with botanical name, family, local name, and habit. The data was collected using interview questionnaires and Field survey sampling method. A total number of 168 species of plants belonging to 50 dicot and 10 monocot families have been recorded in study area mining Dallirajhara city Balod CG. Total number of species, genera and families of both cultivated and wild category was studied. The present work was focused on Home garden plant diversity in relation to remoteness from urban center -Dallirajhara observation in different areas. Present study sites are Biodiversity rich, diverse geomorphology, climatic variations and vegetation with various ecosystems i.e. forest, scrub, grassland, water bodies. The dominant habit in plant Herb- 86, Tree- 31, Shrub- 22, Climber- 21, Aquatic plant- 04, Gymnosperm- 05, and Fern- 04 .The dominant Family in Home garden plant diversity in relation to remoteness from urban center-Dallirajhara top 5 highest family dicot plant, Asteraceae – 15 species, Apocynaceae – 13, Malvaceae - 07, Fabaceae - 07, Rosaceae - 06 and top 5 lowest family dicot family, Spindaceae – 01, Puniaceae - 01, Monospermaceae – 01, Gentianaceae - 01, Begoniaceae - 01 plant species.

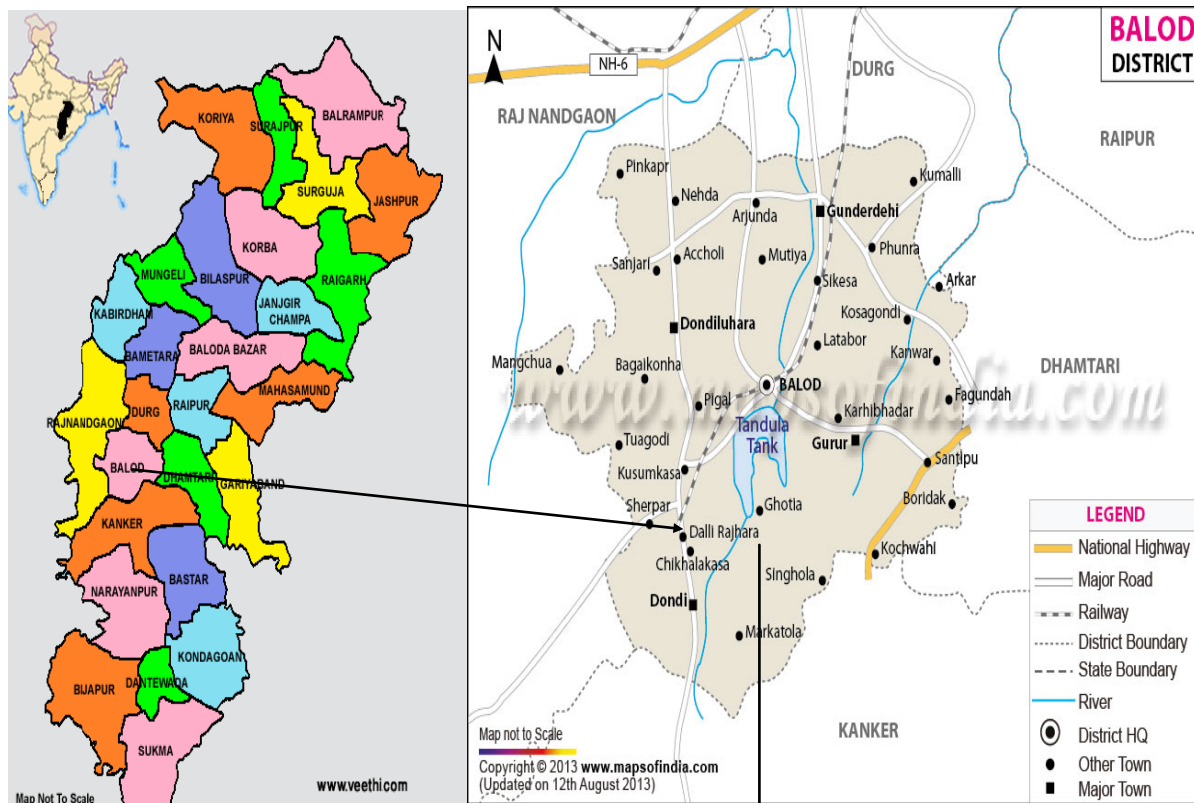


Fig. 1: Showing map study area of Chattisgarh

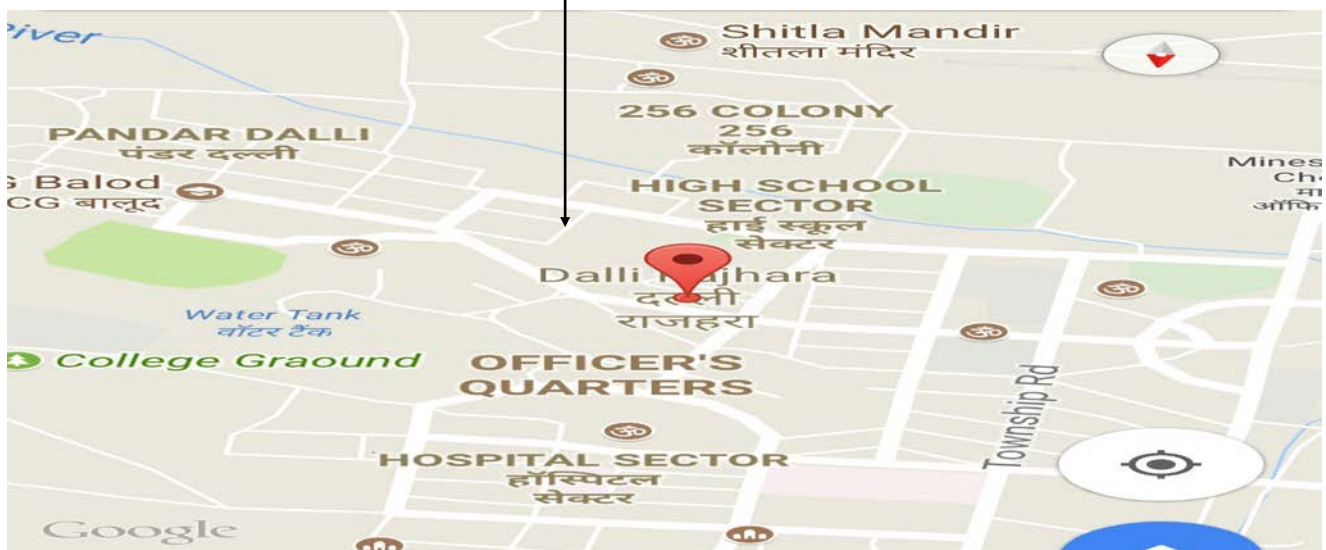


Fig. 2: Showing map of study aria Dallirajhara Distic Balod Location

Home gardening plant list of Dallirajhara City

Observation: The identified and collected plant samples were arranged and documented according to their local names.

S/No.	Habitat	Local name	Botanical name	Family
01	Climber	Kagajphool lal	<i>Bogenvalia spectabalis willd</i>	Nyctaginaceae
02	Climber	Kagajphool white	<i>Bogenvalia spectabalis willd</i>	Nyctaginaceae
03	Climber	American kagajphool	<i>Bogenvalia American a</i>	Nyctaginaceae
04	Shrub	Safed kaner	<i>Oleander indicum (L.)</i>	Apocynaceae
05	Shrub	Lal kaner	<i>Oleander indicum Ll.)</i>	Apocynaceae
06	Shrub	Surajmukhi	<i>Helianthus anus (L.)</i>	Asteraceae
07	Tree	Champa	<i>Magnllia champaca (l.)BAill.</i>	Magnoliaceae
08	Climber	Lal gulab	<i>Rosa indica (L.)</i>	Rosaceae
09	Climber	Pilla gulab	<i>Rosa chainensis (L.)</i>	Rosaceae
10	Climber	Orange gulab	<i>Rosa chainensis(L.)</i>	Rosaceae
11	Climber	Pink gulab	<i>Rosa galica(L.)</i>	Rosaceae
12	climber	White gulab	<i>Rosa cania(L.)</i>	Rosaceae
13	Herb	Sevanti lal	<i>Chrysanthamum indicum (L.)</i>	Asteraceae
14	Herb	Sevanti safed	<i>Chrysanthamum indicum (L.)</i>	Asteraceae
15	Herb	Sewanti blue	<i>Chrysanthamum indicum (L.)</i>	Asteraceae
16	Herb	Genda pilla	<i>Tagetus erecta (L.)</i>	Asteraceae
17	Herb	Safed gonda	<i>Tagetus erecta (L.)</i>	Asteraceae
18	herb	Chandeni gonda	<i>Tagetus petula (L.)</i>	Asteraceae
19	Herb	White lily	<i>Lilium bulbi ferum (L.)</i>	Liliaceae
20	Shrub	Chandani	<i>Tabernemontana divaricata (R.Br.ex Roem&Schutt)</i>	Apocynaceae
21	Heeb	Sadasuhagan	<i>Catheranthus roseus (L.)</i>	Apocynaceae
22	Climber	Koraw pandav	<i>Passiflora incamate (L.)</i>	Passifloraceae
23	Herb	Gulalphool	<i>Mirabillis jlapa (L.)</i>	Nycyaginaceae
24	Shurb	Phoolhar	<i>Callotropis procera (W.T. Aiton)</i>	Asclepiadaceae
25	Tree	Harsingar	<i>Nyctanthus arbortristis(L.)</i>	Nyctanthaceae
26	Herb	Diyaphool	<i>Partulaca oleraceae (L.)</i>	Partulaceae
27	Herb	Bichhiphool	<i>Partulaca gradiflora H.</i>	Partulaceae
28	Shrub	Gudhal red	<i>Hibiscus Rosa sinensis(L.)</i>	Malvaceae
29	Shrub	Gudhal pink	<i>Hibiscus Rosa sinensis(L.)</i>	Malvaceae
30	Shrub	Gudhal yellow	<i>Hibiscus Rosa sinensis(L.)</i>	Malvaceae

31	Shrub	White gudhal	<i>Hibiscus Rosa sinensis</i> (L.)	Malvaceae
32	Herb	Pitunia safed	<i>Pitunia alba</i> Juss.	Solanaceae
33	Herb	Pitunia blue	<i>Pitunia metal</i> Juss.	Solanaceae
34	Tree	Bottel brush	<i>Callistimon citrines</i> (Curtis) <i>Dum.course</i>	Myrtaceaea
35	Herb	Baijantree yellow	<i>Cana indica</i> (L.)	Cannaceae
36	Herb	Baijantree red	<i>Cana indica</i> (L.)	Cannaceae
37	Shrub	Kala dhatura	<i>Dhatura metal</i> (L.)	Malvaceae
38	Shrub	Safed dhatura	<i>Dhatura alba</i> (L.)	Malvaceae
39	Herb	Dahelia safed	<i>Dahelia pinnata</i> (Cav.) 1971	Asteraceae
40	Herb	Dahelia lal	<i>Dahelia pinnata</i> (Cav.) 1971	Asteraceae
41	Herb	Zerbera	<i>Gaillardia pulchella</i> Foug1788	Asteraceae
42	Herb	Gazania	<i>Gazania rigens</i> (L.) Gaertn	Asyeraceae
43	Herb	Kesriya	<i>Barlariya prionitis</i> (L.)	Acanthaceae
44	Hydrophyte	Lily safed	<i>Nymphia alba</i> (L.)	Nymphaceae
45	Hydrophytes	Lily lal	<i>Nymphaea metal</i> (L.)	Nymphaceae
46	Hydrophytes	Kamalphool	<i>Nelumbo nucifera</i> Gaertn	Nymphaceae
47	Tree	Satpamee	<i>Alostonia scolaris</i> (L.) R.Br.	Apocynaceae
48	Herb	Mongra	<i>Jasminum</i> (L.).	Oleaceae
49	Shrub	Ratrani	<i>Cesternum nocturmum</i> (L.)	Solanaceae
50	Herb	Doodh mongara	<i>Euphorbia tithy moloides</i> (L.)	Eiphorbiaceae
51	Herb	Honey spuge	<i>Euphorbia mellifera</i> (Ait.)	Euphorbiaceae
52	Herb	Sweet William	<i>Dianthus barbetus</i> (L.)	Caryophyllaceae
53	Herb	Purple coneflower	<i>Echinacea purperia l</i> (L.).	Asyeraceae
54	Shrub	Star jasmine	<i>Trachelospermum jasminoides</i> Len. (Lindl)	Apocynaceae
55	Gymnosperm	Show tree	<i>Junipers virginiana</i> (L.)	Cupressaceae
56	Herb	Sea dock	<i>Acanthus mollis</i> (L.)	Acanthaceae
57	Shrub	Satawer	<i>Asparagus setaceus</i> (Kunth) (Jessop)	Asparagaceae
58	Herb	Sadasuhagan pink	<i>Vinca minor</i> (L.)	Apocynaceae
59	Herb	Sadasuhagan violet	<i>Vinca minor</i> (L.)	Apocynaceae
60	Climber	Morning glory	<i>Ipomea purprea</i> (L.) Roth	Convolvulaceae
61	Herb	Gladius safed	<i>Gladius communis</i> (L.)	Iridaceae
62	Herb	Gladius gulabi	<i>Gladius communis</i> (L.)	Iridaceae
63	Tree	Ashok tree	<i>Saraca indica</i> (Roxb.) Willd	Caesalpinaceae

64	Gymnosperm	Thuja	<i>Platycalodus orientalis</i> (L.)	Cupresaceae
65	Gymnosperm	Garden cypas	<i>Cycas revolute</i> (Thunb)	Cycadaceae
66	Gymnosperm	X mas tree	<i>Auracaria juss</i>	Aurocareaceae
67	Tree	Palm	<i>Palm sps.</i>	Palmaceae
68	Tree	Fan palm	<i>Livistona chinesis</i> R. Br. (Jacq)	Arecaceae
69	Herb	Gheekwar	<i>Alovera barbendensis</i> (L.) Burm	Asphodalaceae
70	Herb	Cactus	<i>Pachycereus pringlei</i> S. Watson Britton Bose	Cactaceae
71	Herb	Nagphani	<i>Opuntia ficus indica</i> (L.) Mill.	Cactaceae
72	Shrub	Pilla kaner	<i>Thevetia nuriifolia</i> (L.) Lippolad	Apocynaceae
73	Shrub	Jungle flame	<i>Ixora coccinia</i> (L.)	Rubiaceae
74	Herb	Rhoeadiscoller	<i>Tradescantia spathacea</i> S.W.	Commelinaceae
75	Shrub	Fan palm	<i>Trachycarpus fortunei</i> Hook. H. Wendll	Arecaceae
76	Herb	Supariphool	<i>Gompherina globosa</i> (L.)	Amaranthaceae
77	Herb	Purple heart	<i>Tradescantia Virginia</i> (L.)	Commeliaceae
78	Herb	Wandering jew	<i>Tradescantia zebrine</i> (Schinz) D. R. Hunt	Commeliaceae
79	Herb	Wild pansy	<i>Viola tricolor</i> (L.)	Vivolaceae
80	Herb	Rajnigandha	<i>Palianthus tuberosa</i> (L.)	Asparagaceae
81	Herb	Calendula	<i>Calendula officinalis</i> (L.)	Candulaceae
82	Herb	Wild strawberry	<i>Fragaria vesca</i> (L.)	Rosaceae
83	Herb	Madonna Lily	<i>Lilium candidum</i> (L.)	Liliaceae
84	Herb	Tulip	<i>Tulipa gesneriana</i> (L.)	Liliaceae
85	Herb	Tulip	<i>Callistephus chinensis</i> (L.) Nees.	Asteraceae
86	Herb	Orchid	<i>Orchid juss.</i> (L.)	Orchidaceae
87	Herb	Arbi kulfa	<i>Arum italicum</i> mill	Aracaceae
88	Herb	Bellflower	<i>Lobelia erinus</i> (L.)	Campanulaceae
89	Herb	Showpatti	<i>Plectoranthus scutelleriodes</i> (L.)	Lamiaceae
90	Herb	Kekati	<i>Agave Americana</i> (L.)	Asperagaceae
91	Shrub		<i>Centarium ertbraea</i> Rafn	Gentianaceae
92	Climber	Yellow flower	<i>Parthenocissus quinquefolia</i> (L.)	Vitaceae
93	Shrub	Crotton sps	<i>Codium varigatum</i> (L.)	Euphorbiaceae
94	Shrub	Showpatti	<i>Codium varigatum</i> (L.)	Euphorbiaceae
95	Climber	Purple wood sorrel	<i>Oxalis pescaprae</i> (L.)	Oxalidaceae
96	Gymnosperm	Show tree	<i>Pinus strobus</i> (L.)	Pinaceae

97	Herb	Tulip	<i>Tulipa sylvastris</i> (L.)	Liliaceae
98	Climber	Yellow allamanda	<i>Allmonda cathartica</i> (L.)	Apocynaceae
99	Tree	Champa	<i>Plumeria rubra</i> (L.)	Apocynaceae
100	Herb	Indian blanket	<i>Gaillardia pulchella</i> Frough 1788	Asteraceae
101	Hydrohyte	Pistia	<i>Pistia stratiotes</i> (L.)	Aracaceae
102	Tree	Dok Champa	<i>Plumeria alba</i> (L.)	Apocynaceae
103	Herb	Kukra mour	<i>Celosia argentea</i> (L.)	Amaranthaceae
104	Herb	Golden lily	<i>Alstromeria aurea</i> (G.)	Astromeriaceae
105	Herb	Common day lily	<i>Hemerocallis fulva</i> (L.)	Xanthorhoaceae
106	Herb	Monyplant toxic	<i>Epipremum aureum</i> (Linden & Andre)	Aracaceae
107	Herb	Show patti	<i>Acalypha wilkesiana</i> Mull.Arg	Euphorbiaceae
108	Herb	American grass	<i>Acetropis Americana</i> grass	Poaceae
109	Herb	Patterchatta	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae
110	Climber	Satawar	<i>Asparagus racemose</i> Willd	Asparagaceae
111	Climber	Giloy	<i>Tinospora cardifolia</i> Thunb Miers	Monispermaceae
112	Herb	Cholai bhaji	<i>Amaranthus tricolor</i> (L.)	Amaranthaceae
113	Herb	Palak	<i>Spinacia oleracea</i> (L.)	Amaranthaceae
114	Herb	Pyaj	<i>Allium cepa</i> (L.)	Liliaceae
115	Herb	Lahshun	<i>Allium sativum</i> (L.)	Liliaceae
116	Herb	Dhaniya	<i>Coriandrum sativum</i> (L.)	Apiaceae
117	Herb	Gajar	<i>Daucus carota</i> (L.)	Apiaceae
118	Tree	Seetaphal	<i>Anona reticulata</i> (L.)	Anonaceae
119	Tree	Chhind	<i>Phoenix dactylifera</i> (L.)	Arecaceae
120	Herb	Bhringraj	<i>Eclipta prostrata</i> (L.)	Asteraceae
121	Herb	Sarnso	<i>Brassica campestris</i> (L.)	Brassicaceae
122	Tree	Begonia	<i>Begonia oblique</i> (L.)	Begoniaceae
123	Herb	Phoolgobhi	<i>Brassica oleracea</i> (L.)	Brassicaceae
124	Herb	Bandhgobhi	<i>Brassica oleracea</i> (L.)	Brassicaceae
125	Climber	Kaddu	<i>Cucurbita pepo</i> (L.)	Cucurbitaceae
126	Climber	Torai	<i>Luffa acutangula</i> (L.) Roxb.	Cucurbitaceae
127	Climber	Louki	<i>Lagenaria ceraria</i> (Molina) Standl	Cucurbitaceae
128	Herb	Keu kanda	<i>Costus speciosus</i> (Koen)	Zingiberaceae
129	Tree	Ramphal	<i>Annona reticulata</i> (L.)	Anonaceae

130	Tree	Aam	<i>Mangifera indica</i> (L.)	Anacardiaceae
131	Tree	Munga	<i>Moringa olifera</i> (L.)	Moringaceae
132	Herbs	Lajwanti	<i>Mimosa pudica</i> (L.) ²	Fabaceae
133	Tree	Papita	<i>Carica papaya</i> (L.) ¹	Caricaceae
134	Tree	Anar	<i>Punica granatum</i> (L.)	Puniaceae
135	Herbs	Pudina	<i>Mentha spicata</i> (L.)	Lamiaceae
136	Shrub	Karonda	<i>Carissa carondus</i> (L.)	Apocynaceae
137	Herb	Kochai	<i>Colocasia esculanta</i> (L.) (Schott)	Araceae
138	Herb	Dubghass	<i>Cynodon dactylon</i> (L.) Pers	Poaceae
139	Shrub	Nimbu	<i>Citrus medica</i> (L.)	Rutaceae
140	Herb	Pillikateli	<i>Argemone maxicana</i> (L.)	Papavaraceae
142	Tree	Jam	<i>Psidium gujava</i> (L.)	Myrtaceae
143	Tree	Shahtoot	<i>Morus alba</i> (L.) ¹⁷⁵³	Moraceae
144	Herb	Tuki	<i>Ocimum sanctum</i> (L.)	Lamiaceae
145	Herb	Methi	<i>Trigonella gracecum foenum</i> (L.)	Fabaceae
146	Climber	Sem	<i>Phaseolus vulgaris</i> (L.)	Fabaceae
147	Climber	Matar	<i>Pisum sataivum</i> (L.)	Fabaceae
148	Herb	Bhindi	<i>Ablemoschus esculantus</i> (L.)	Malvaceae
149	Tree	Litchi	<i>Litchi chinensis</i> (Sonn)	Spindaceae
150	Herb	Tamatar	<i>Lycopersicum esculantum</i> (L.)	Solanaceae
151	Herb	Haldi	<i>Curcuma longa</i> (L.)	Zingiberaceae
152	Shrub	Orange	<i>Citrus reticulate</i> (L.)	Rutaceae
153	Tree	Narial	<i>Cocus nucifera</i> L.	Areaceae
154	Tree	Gulmohar	<i>Delonix regia</i> (Boj.)	Leguminaceae
155	Shrub	Manchimudi	<i>Lantana camara</i> (L.)	Verbinaceae
156	Tree	Palash	<i>Butea monospermum</i> (Lam.)Taub.	Fabaceae
157	Tree	Bargad	<i>Ficus bengalensis</i> (L.) 1753	Moraceae
158	Shrub	Arahar	<i>Cajanus cajan</i> (L) Millsp.	Fabaceae
159	Herb	Muli	<i>Raphanus sativus</i> (L.)	Brassicaceae
160	Herb	Chana	<i>Cicer aritenum</i> (L.)	Fabaceae
161	Tree	Subabool	<i>Leucina leucocephala</i> (Lam) de Wit ²	Fabaceae
162	Tree	Pipal	<i>Ficus religiosa</i> (L.)	Moraceae
163	Herb	Hadjod	<i>Cissus quadra gularis</i> (L.)	Vitaceae
164	Pteridophyta	Pteris	<i>Pteridium aquilinum</i> (L.) Kuhn	Pteridiaceae

165	Pteridophyta	Water moss	<i>Salvinia molesta</i> . D. Mitch	Salviniaceae
166	Pteridophyta	Azolla	<i>Azolla pinnata</i> R.Br.	Salviniaceae
167	Pteridophyta		<i>Adiantum raddianum</i> C.Pres	Pteridiaceae
168	Herb	Lemongross	<i>Cymbopogon citrates</i> (DC.) <i>Stapf</i> 1906	Poaceae

Dicot family list

01	Nyctaginaceae	04
02	Apocynaceae	13
03	Asteraceae	15
04	Magnoliaceae	01
05	Rosaceae	06
06	Passifloraceae	01
07	Asclepiadaceae	01
08	Nyctanthaceae	01
09	Portulacaceae	02
10	Malvaceae	07
11	Solanaceae	04
12	Myrtaceae	02
13	Nymphaeaceae	03
14	Oleaceae	01
15	Euphorbiaceae	05
16	Caryophyllaceae	01
17	Acanthaceae	02
18	Convolvulaceae	01
19	Caesalpiniaceae	01
20	Cactaceae	02
21	Rubiaceae	01
22	Amaranthaceae	04
23	Vivaceae	01
24	Candulaceae	01
25	Orchidaceae	01
26	Campanulaceae	01
27	Lamiaceae	03
28	Vitaceae	02
29	Gentianaceae	01
30	Oxalidaceae	01
31	Araceae	02
32	Crassulaceae	01
33	Monospermeae	01
34	Apiaceae	02
35	Anonaceae	03
36	Brassicaceae	04
37	Begoniaceae	01
38	Cucurbitaceae	03
39	Zinziberaceae	02
40	Anacardiaceae	01
41	Moringaceae	01

42	Fabaceae	07
43	Caricaceae	01
44	Puniaceae	01
45	Rutaceae	02
46	Papaveraceae	01
47	Moraceae	03
48	Spindaceae	01
49	Leguminosaceae	02
50	Verbinaceae	01
	Total =	129

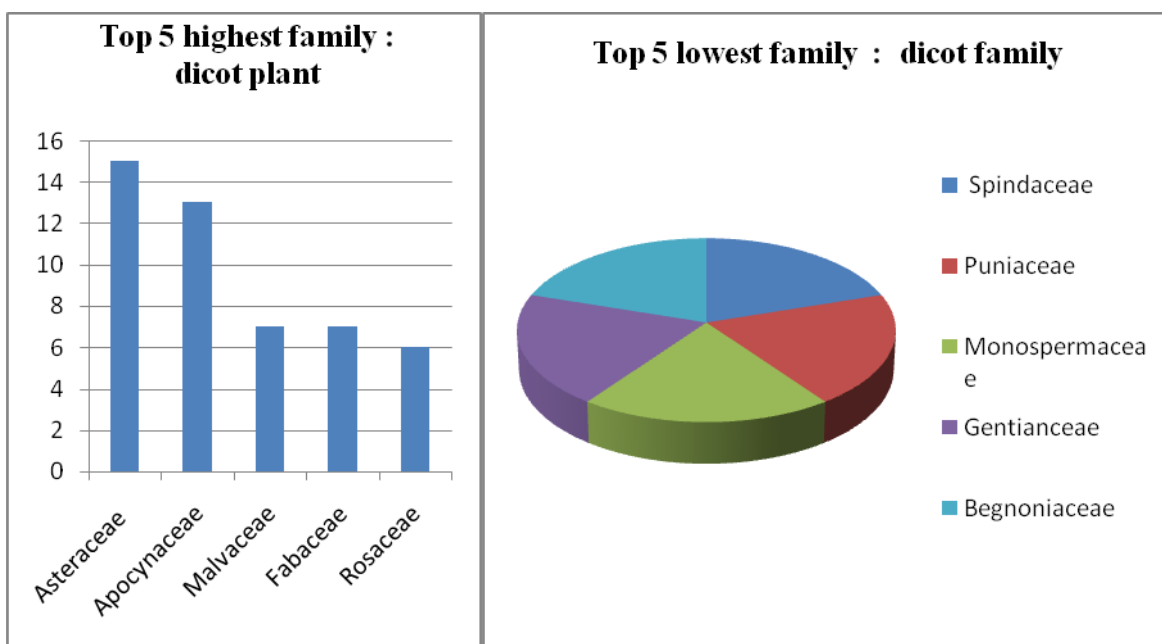


Fig. 3: Top 5 dicot family of plant Species

Fig. 4: Top lowest 5 dicot family of plant Species

Monocot family list

01	Liliaceae	06
02	Cannaceae	02
03	Asparagaceae	04
04	Iridaceae	02
05	Palmaceae	01
06	Arecaceae	06
07	Asphodalceae	02
08	Commeliaceae	03
09	Poaceae	03
10	Astrmeriaceae	01
	Total =	30

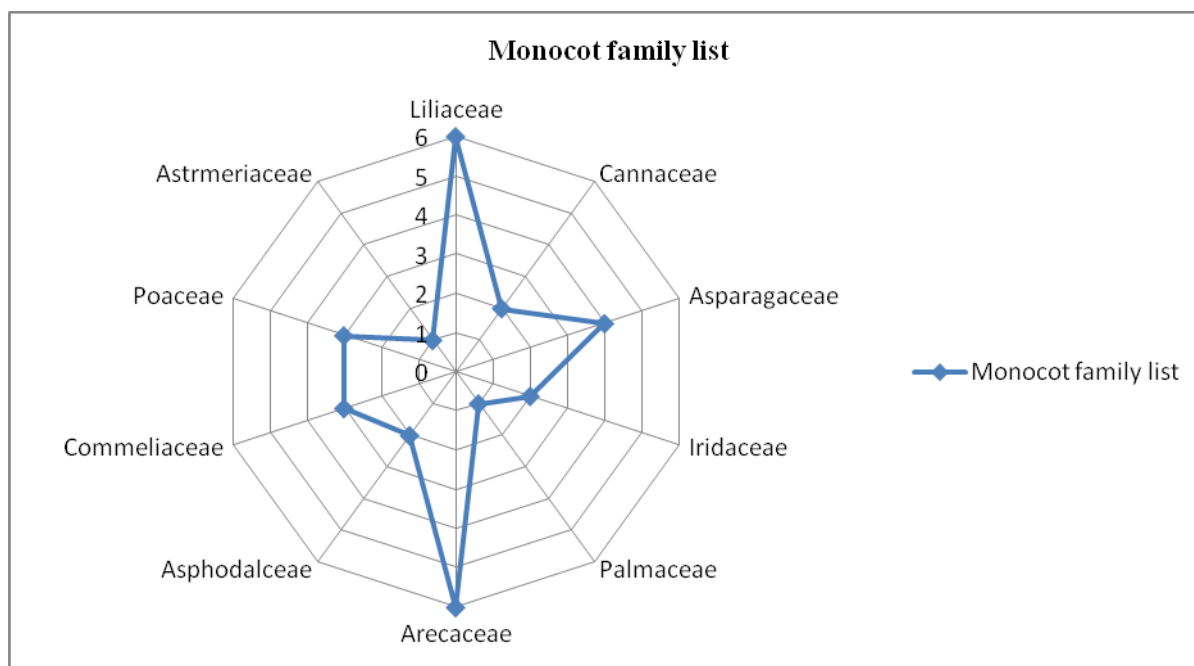


Fig. 5: Monocot family of plant Species

Gymnosperm plant list

01	Cupressaceae	02
02	Cycadaceae	01
03	Aurocariaceae	01
04	Pinaceae	01
Total		= 05

Pteridophytes plant list

01	Pteridiaceae	02
02	Solvaniaceae	02
Total		= 04

S/No.	Diversity of plant species		
1	Angiosperm	159 plants	95%
2	Gymnosperm	05 plants	3%
3	Pteridophytes	04 plants	2%
4	Total	168plants	100%

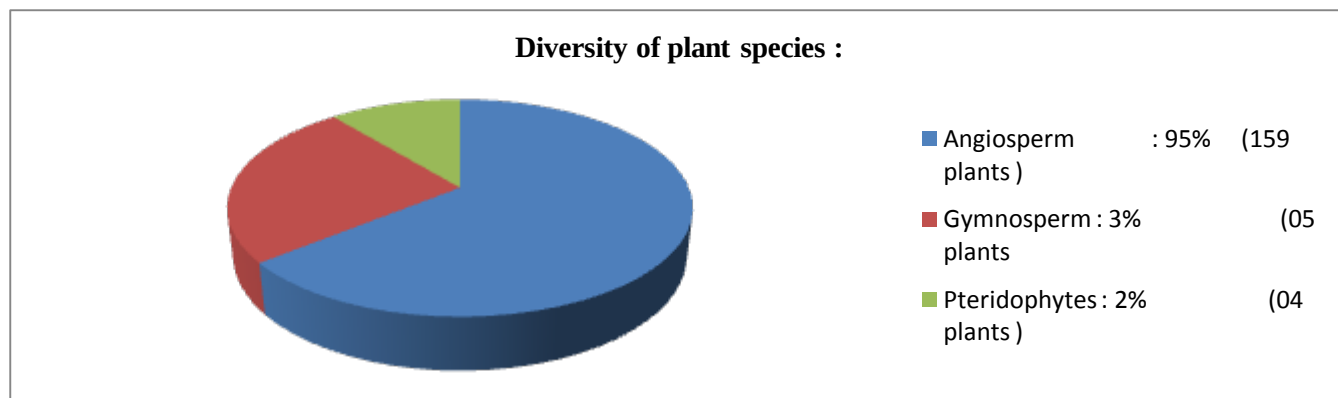


Fig. 6: Diversity of plant Species

S/N0.	Habitate diversity		
1	Herb	86	(51 %)
2	Shrub	22	(14%)
3	Tree	31	(18 %)
4	Climber	21	(13%)
5	Hydrophytes :	04	(2%)
6	Pteridophyta	04	(2%)

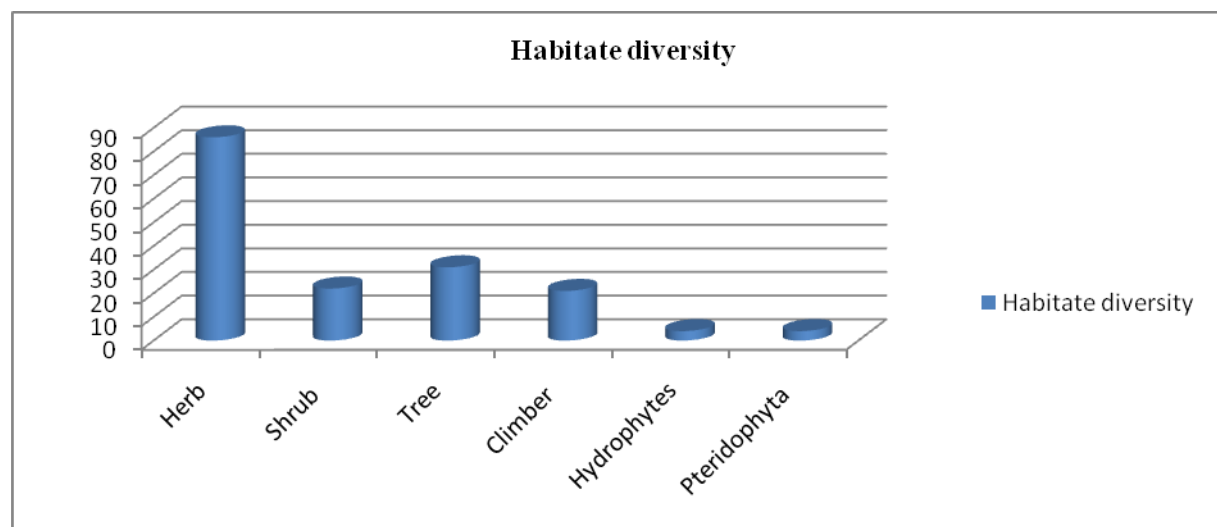


Fig. 7: Distribution of plant as per their habit



Bogenvallia spectabilis L.



Tagetis erecta L.



Catheranthus roseus L.



Hibiscus rosinensis L.



Helianthus annuus L.



Chrysanthemum indicum L.



Plectranthus scutellarioides L.



Dahlia pinnata L. (Red)



Codium variegatum L.



Interview with local people



Cycas revoluta Thunb



Nelumbo nucifera Gaertn



Mangifera indica L.



Platycodon orientalis L.



Hemerocallis fulva L.



Ucina lucocephala Lam.



Plumeria rubra L.



Fan palm



Pitunia alba L.



Various plantpots



Codium varigatum L.



Daheliapinnata L(white).



Tabernemontana divertica R.Br.



Cleosia argentea L.



Euphorbia tithymaloides L.



Passiflora edulis L.



Wedelia triloba L

Fig. 8: Some Photographs from field spots

Conclusion

Home gardens are an important component of the farming system in Home garden plant diversity in relation to remoteness from urban center-Dallirajhara conducted in Balod district, Chhattisgarh, and contribute significantly to sustaining livelihood through improved food security and family nutrition. They represent an important reservoir of diversity of plant species and have immensely contributed to the maintenance, promotion and in situ conservation. However, these home gardens have long remained a neglected area for research and development, and very limited information exists on them. A scientific study of home garden systems in Dallirajhara is, therefore, urgently required. Such a study will contribute in three ways: (a) provide a better understanding of the mechanisms underlying traditional home garden systems and point out areas of further research; (b) chalk out development strategies and development actions that would further enrich the traditional home garden system; and (c) inform planners and policy-makers with the information necessary to include home gardens in national development and conservation strategy.

Acknowledgments

The authors express their sincere thanks to all the respondents for sharing information and extending co-operation during the course of investigation.

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How to cite this article

Sahu M.S. and Sahu S.L. (2019). Home gardening plant diversity in relation to remoteness from urban center- Dallirajhara Distt. – Babod (C. G.), *Int. J. Pharm. Life Sci.*, 10(1):6031-6047.

Source of Support: Nil; Conflict of Interest: None declared

Received: 18.12.18; Revised: 24.12.18; Accepted: 22.01.19