



Plant Biodiversity of Different Compartments of Gorewada Forest, Nagpur District, (M.S.)

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Abstract:

World's largest biodiversity is in Tropical forests which play an important role in the maintaining the global terrestrial carbon budget. Gorewada forest is one of the tropical forests located in Nagpur district, (M.S.), India. It is a rich source of biodiversity which represents a valuable global resource such as food, fodder, fruits, fuel, gums and medicines that are beneficial to mankind. Among various resources of forests, legumes and non-legumes represents a very large and diverse group of plant kingdom, ranging from herbs, shrubs, trees, climbers and grasses. In the present study, variety of legume and non-legume plants from seven different compartments of Gorewada forest viz. 790-796 of Gorewada forest of Nagpur district were surveyed and collected for taxonomic identification of plants and their distribution pattern i.e. density to find out the dominant flora. Most of the plants in the different compartments are common which includes the leguminous plants which were in large number as compared to non-legumes. Leguminous plants found are *Abrus precatorius*, *Acacia* sp., *Albizia lebbek*, *Butea monosperma*, *Bahunia* sp., *Caesalpinia pulcherima*, *cassia fistula*, *Cassia tora*, *Leucaena leucocephala*, *Mimosa hamata*, *Mucuna pruriens*, *Pithecellobium dulce*, *Pongamia pinnata*, *Tamarindus indica*, *Tephrosia purpurea*, *Tephrosia hamiltonii* etc. and were as non-legumes are *Blumea* sp., *Tectona grandis*, *Santalalum album*, *Zizipus* sp., *Celosia argentea*, *Cleistanthus collinus*, *Mytragyna perbifolia*, *Partheneium* sp., *Semicarpus anacardium*, *Sida* sp., *vernonia cinerea* etc. This study will be useful in determining the species diversity of plant which will be useful in characterizing the structure of the community available in and around Gorewada International Zoo.

Keywords: Tropical forest, plant biodiversity

Introduction:

Forests provide over US \$ 400 billions to the world's economy annually and are vital to maintain healthy ecosystem. Yet, current demand for forest products may exceed the limit of sustainable consumption by 25%. To satisfy this, maintenance of earth's biological diversity is today's need for the continued vitality of agriculture and medicine and perhaps even to life on earth itself. Yet, human activities such as mining activity are pushing many thousands of plant and animal species into extinction. Two of every three species are estimated to decline.

1. The forest cover in India was estimated as 675,538 sq. km. and constitutes 20.55 percent of its geographic area. Of this, dense and open forest cover constitutes as 12.68 and 7.87 percent, respectively. However, the area of non-forest in the country is 2,611,725 sq. km. and constitutes 79.45 percent of the geographical areas (Katiyar, 2005). Development of richness in the vegetation wealth and biodiversity of soil is of prime importance in the forest cover as well as on the non - forest area to conserve the bioresource and tree wealth.

2. Many parts of country are facing problem of forest resources depletion, due to lack of proper physico-chemical and microbiological status of forest soils. Forests of the tropical zones constitutes about half of the world's forest and mostly occur in developing countries. In recent years tropical forests have received much attention





because of their species richness, high standing biomass, and global net primary productivity. Tropical forests consist of world's largest biodiversity and play an important role in the global terrestrial carbon budget. The structure, composition and functioning of this forests are undergoing rapid changes because of anthropogenic activities, biotic pressure and widespread economic growth are altering the natural vegetal cover and putting tremendous pressure on the sustenance of the few left over tropical forest covers in India. As a result, there is lot of spatial and temporal variations in the reported values of species richness, composition and productivity. There is a pressing need to monitor the rate and extent of changes in the tropical forest covers in countries like India for efficient planning and management leading to sustainable development. Sustainable management of forest practices is many. In forest management practices, high scientific skills are required. Development of richness in the vegetation wealth and biodiversity of soil is of prime importance in the forest cover as well as on the non-forest area to conserve the bioresources and tree wealth. Many parts of country are facing problem of forest resources depletion due to poor nutritive condition of rhizospheric soils of forest. Therefore, in the proposed study an attempt has been made to characterize Gorewada forest with respect to the native flora of forest to determine the species diversity for determining the structure of the community available in and around Gorewada International Zoo.

Material and Methods:

The plants from Gorewada International Zoo were collected for the preparation of herbaria and were botanically identified with the help of floras.

Site Survey:

1. The total area of Gorewada forest area is 1881.66 ha.
2. The total area of Gorewada forest area is unequally divided in to two parts by Nagpur-Kalmeshwar highway.
3. Between the two parts, area on left side of the Nagpur-Kalmeshwar highway is divided into three compartments allotted with numbers 790, 791, and 792.
4. While the second part that is to the right side of the Nagpur-Kalmeshwar highway has four compartments allotted with No. 793, 794, 795 and 796 along with a water tank of 57.93 ha. Visual depiction of water body present in Gorewada forest is presented in Plate 1.

Survey of native plant species in and around Gorewada International Zoo:

The tour in and around different compartments of Gorewada forest was made in phased manner so to cover most of the parts of the Gorewada forest for the survey of native plant species and soil sampling. Survey of Gorewada forest was conducted by project team from Sevadal Mahila Mahavidyalaya, Nagpur. During every visit, as many specimens as possible were collected and photographs were taken.

Specimens were brought to the college laboratory and all plants were indentified by using reference floras by Hooker's (1872-1897), Ugemuge (1986),





Almeida (1990), Joshi (2000) and Singh *et al.* (2001). During visit A few plants collected during visit have been listed. Weedy species have also been recorded.

Result and Discussion:

Description of Gorewada forest Site

Intensive and extensive site surveys were conducted at Gorewada forest during December-2007 to March-2008. During survey it was found that seven different compartments have characteristic features with respect to plants species available during winter season. Total area of Gorewada forest area is 1881.66 ha. The forest area is unequally divided in to two parts by Nagpur-Kalmeshwar highway. Among the two, part on left side of the Nagpur-Kalmeshwar highway, is divided into three compartments allotted with numbers 790, 791, and 792 and second part, to the right side of the Nagpur-Kalmeshwar highway, has four compartments allotted with No.793, 794, 795 and 796 along with a water tank of 57.93 ha.

Description of Flora available in different Compartments of Gorewada Forest

Compartment No. 790:

This site has almost a barren look with very few plant species towards its entrance with some of the pits dug for plantation on barren land. However, the density of plants improved towards the center. Types of plant species comprising of trees, shrubs, herbs, climbers and grasses present in this compartment is presented in **Table 1**. Among the plant species available, *Alternanthera pungens* and *Cassia tora* (herbs) and trees such as *Acacia catechu*, *Butea monosperma*, *Cassia siamea*, *Diospyros melanoxylon*, *Maytenus emarginata*, *Mitragyna perbifolia*, *Ziziphus mauritiana* are the predominant species followed by *Acacia catechu*, *Albizia odoratissima*, *Azadirachta indica* and *Dulbergia sisso*. Along the extremity of the compartment i.e. towards Nagpur-Kalmeshwar highway monoseries plantation of *Dendrocalamus strictus* was found which was planted to provide protective barriers from invaders. The forest present in 790 compartment is of dry deciduous type.

Compartment No. 791:

This site also has almost a barren and dry deciduous look like that found in compartment No. 790. with comparatively a very few plant species. However, the density of plants improved towards the center. Types of plant species comprising of trees, shrubs, herbs, climbers and grasses present in this compartment is presented in **Table 1**. Among the plant species available, *Alternanthera pungens*, *Cassia tora* (herbs) and *Acacia catechu*, *Butea monosperma*, *Mitragyna perbifolia*, *Cassia siamea*, *Maytenus emarginata*, *Ziziphus mauritiana*, *Diospyros melanoxylon* (trees) are the predominant species followed by *Dulbergia sisso*, *Albizia odoratissima*, *Acacia catechu* and *Azadirachta indica*.

Compartment No. 792:

In compartment number 792 of Gorewada forest about 42 different plant species classified as trees, shrubs, herbs, climbers and grasses (**Table. 1**). Among the tree species dominant types were *Acacia catechu*, *A. leucophloea*. *A. nilotica*,





Albizia odoratissima, *Butea monosperma*, *Cassia siamea*, *Mitragyna perbifolia*, and *Ziziphus mauritiana*.

Compartment No. 793:

This compartment is located at West side of Gorewada Catchments area. Multi-species plantation was found which comprised of predominant species viz. *Acacia catechu*, *Hardwickia binata*, *Butea monosperma*, *Cleistanthus collinus*, *Dalbergia sisso* followed by *Santallum album*, *Acacia arabica*, *Bombox cieba*, *Acacia leucophloea*, *Soymida febrifuga*, *Mimosa hamata*, *Ziziphus mauritiana* (**Table 1**). Different types of herbs and shrubs were also found. Fruit bearing plants of *Ziziphus oenoplia* and *Abrus precatorius* were also found. Plantation of *Santalum album* was also observed

Compartment No.794:

This compartment is situated on the right side of Nagpur - Kalmeshwar highway. Major part of this compartment is densely populated with multiple plant species (**Table 1**). However, successful monospecies plantation of *Xylia xylocarpa* is found in small area of this compartment with few plants of *Butea monosperma*, and *Azadirachta indica*. Perennial plant species of this compartment are *Maytenus emarginata*, *Butea monosperma*, *Acacia catechu*, *Acacia nelotica*, *Delbergia sisso*, *Cassia fistula*, *Ailanthus excelsa*, *Acacia leucophloea*, *Albizia lebbeck*, *Pithecellobium dulce*, *Pongamia pinnata*, *Gmelina arborea*, *Phoenix sylvestris*, *Dendrocalamus strictus* along with herbs, shrubs and climbers. Different types of thorny shrubs *Ziziphus rotandifolia* bearing fruits are found in this dry deciduous compartment. Termite infestation was found in *Butea monosperma* and *Acacia leucophloea*. An example of climber viz. *Macuna pruriens* present in compartment number 794. Barren patch of land is also found in compartment number 794.

Compartment No.795:

This compartment has a water body measuring 57.93 ha. and multispecies plantation and list of plants found during survey is presented in **Table 1**. Some of the predominant types of plant species available in compartment number 795 are *Acacia catechu*, *Acacia leucophloea*, *Butea monosperma*, *Cleistanthus collinus*, *Mimosa hamata*, *Tectona grandis*, and *Ziziphus mauritiana*.

Compartment No. 796:

This compartment is adjacent to Compartment number 794. It is characterized to have natural hilly area. In the centre of this compartment almost barren rocky area with very few plant species viz., *Tectona grandis*, *Ziziphus mauritiana* and *Ziziphus oenoplia* are found giving dry deciduous look to the compartment. The barren area of this compartment needs plantation. However, on the lower side of hilly area there is Gorewada reservoir and on top of the hilly area dense forest is present. Top of the hilly area is densely covered with green canopy and the dominant plant species available are *Maytenus emarginata*, *Ziziphus oenoplia*, *Butea monosperma*, *Acacia catechu*, *Acacia nelotica*, *Delbergia sisso*, *Cassia fistula*, *Ailanthus excelsa*, *Acacia leucophloea*, *Albizia lebbeck*, *Pithecellobium dulce*, *Pongamia pinnata*, *Gmelina arborea*, *Phoenix sylvestris*, *Dendrocalamus*





strictus, *Tectona grandis*, *Semicarpus anacardium*, *Mimosa hamata*, *Grewia tiliifolia*, *Hardwickia binata*, *Terminalia arjuna* (**Table 1**). In this compartment there is mother plant of *Terminalia arjuna*. In this compartment, barren patch of land is present which is almost devoid of vegetation due to inhabitation of Sita Gondi people (the local tribal community). However, *Ziziphus* sp. were found sparsely. Amanalla is passing through this compartment that is a centre of Gorewada catchment area. Few plants of *Tectona grandis* and *Acacia leucophloea* are found to be infested by termites.

Table. 1- List of Various Plant Species Present in different Compartments of Gorewada forest

S. No.	Comp. No. 790	Comp. No.791	Comp. No.792	Comp. No.793	Comp. No.794	Comp. No.795	Comp. No.796
	Trees	Trees	Trees	Trees	Trees	Trees	Trees
1	<i>Acacia catechu</i>	<i>Acacia catechu</i>	<i>Acacia catechu</i>	<i>Acacia arabica</i>	<i>Acacia catechu</i>	<i>Acacia catechu</i>	<i>Acacia catechu</i>
2	<i>Acacia leucophloea</i>	<i>Acacia leucophloea</i>	<i>Acacia leucophloea</i>	<i>Acacia catechu</i>	<i>Acacia leucophloea</i>	<i>Acacia leucophloea</i>	<i>Acacia leucophloea</i>
3	<i>Acacia nilotica</i>	<i>Acacia nilotica</i>	<i>Acacia nilotica</i>	<i>Acacia leucophloea</i>	<i>Acacia nilotica</i>	<i>Azadirachta indica</i>	<i>Acacia nilotica</i>
4	<i>Adina cordifolia</i>	<i>Aegel marmalosa</i>	<i>Albizia odoratissima</i>	<i>Acacia nilotica</i>	<i>Ailanthus excelsa</i>	<i>Butea monosperma</i>	<i>Azadirachta indica</i>
5	<i>Ailanthus excelsa</i>	<i>Ailanthus excelsa</i>	<i>Andropogon pumilus</i>	<i>Albizia lebbeck</i>	<i>Albizia lebbeck</i>	<i>Cleistanthus collinus</i>	<i>Bauhinia purpuria</i>
6	<i>Albizia odoratissima</i>	<i>Albizia odoratissima</i>	<i>Azadirachta indica</i>	<i>Albizia odoratissima</i>	<i>Azadirachta indica</i>	<i>Emblica officinalis</i>	<i>Bauhinia racemosa</i>
7	<i>Anogeissus latifolia</i>	<i>Azadirachta indica</i>	<i>Bauhinia racemosa</i>	<i>Annona squamosa</i>	<i>Bauhinia racemosa</i>	<i>Leucaena leucocephala</i>	<i>Bombaxi cieba</i>
8	<i>Azadirachta indica</i>	<i>Bauhinia racemosa</i>	<i>Butea monosperma</i>	<i>Azadirachta indica</i>	<i>Butea monosperma</i>	<i>Mimosa hamata</i>	<i>Butea monosperma</i>
9	<i>Bauhinia racemosa</i>	<i>Butea monosperma</i>	<i>Cassia siamea</i>	<i>Bombaxi cieba</i>	<i>Cassia fistula</i>	<i>Phoenix sylvestris</i>	<i>Dalbergia sissoo</i>
10	<i>Bombaxi cieba</i>	<i>Cassia siamea</i>	<i>Dalbergia sissoo</i>	<i>Butea monosperma</i>	<i>Dalbargia sissoo</i>	<i>Pongamia pinnata</i>	<i>Dandrocalamus strictus</i>
11	<i>Butea monosperma</i>	<i>Dalbergia sissoo</i>	<i>Dandrocalamus strictus</i>	<i>Cleistanthus collinus</i>	<i>Dandrocalamus strictus</i>	<i>Santalum album</i>	<i>Delonix regia</i>
12	<i>Cassia angustifolia</i>	<i>Dandrocalamus strictus</i>	<i>Dolichandrone falcata</i>	<i>Dalbergia sissoo</i>	<i>Leucaena leucocephala</i>	<i>Tamarindus indica</i>	<i>Diospyros melanoxyton</i>
13	<i>Cassia siamea</i>	<i>Delonix regia</i>	<i>Maytenus emarginata</i>	<i>Eucalyptus sp.</i>	<i>Maytenus emarginata</i>	<i>Tectona grandis</i>	<i>Grewia tiliifolia</i>
14	<i>Dalbargia sissoo</i>	<i>Diospyros melanoxyton</i>	<i>Mimosa hamata</i>	<i>Gemelina arborea</i>	<i>Mimosa hamata</i>	<i>Ziziphus mauritiana</i>	<i>Leucaena leucocephala</i>
15	Dandrocalamus strictus	<i>Leucaena leucocephala</i>	<i>Mitragyna perbifolia</i>	<i>Hardwickia binata</i>	<i>Mitragyna perbifolia</i>	Shrubs	<i>Maytenus emarginata</i>
16	<i>Diospyros melanoxyton</i>	<i>Maytenus emarginata</i>	<i>Phoenix sylvestris</i>	<i>Leucaena leucocephala</i>	<i>Phoenix sylvestris</i>	<i>Lantana camera</i>	<i>Mimosa hamata</i>
17	<i>Dolichandrone falcata</i>	<i>Mimosa hamata</i>	<i>Semicarpus anacardium</i>	<i>Merremia emarginata</i>	<i>Pithecellobium dulce</i>	<i>Xanthium strumarium</i>	<i>Mitragyna perbifolia</i>
18	<i>Emblica officinalis</i>	<i>Mitragyna perbifolia</i>	<i>Tamarindus indica</i>	<i>Mimosa hamata</i>	<i>Pongamea pinnata</i>	Climbers	<i>Phoenix sylvestris</i>
19	<i>Grewia tiliifolia</i>	<i>Phoenix sylvestris</i>	<i>Tectona grandis</i>	<i>Phoenix sylvestris</i>	<i>Tamarindus indica</i>	<i>Abrus precatorius</i>	<i>Pithecellobium dulce</i>
20	<i>Leucaena leucocephala</i>	<i>Pongamia pinnata</i>	<i>Terminalia bellirica</i>	<i>Santalum album</i>	<i>Tectona grandis</i>	<i>Ipomea aquatica</i>	<i>Santalum album</i>
21	<i>Maytenus emarginata</i>	<i>Semicarpus anacardium</i>	<i>Ziziphus glaberrima</i>	<i>Soymida febrifuga</i>	<i>Woodfordia fruticosa</i>	<i>Ipomea quamoclit</i>	<i>Semicarpus anacardium</i>
22	<i>Mimosa hamata</i>	<i>Tamarindus indica</i>	<i>Ziziphus mauritiana</i>	<i>Ziziphus glaberrima</i>	<i>Xylia xylocarpa</i>	Herbs	<i>Sesamum orientale</i>





23	<i>Mitragyna perbifolia</i>	<i>Terminalia bellirica</i>	Shrubs	<i>Ziziphus mauritiana</i>	<i>Ziziphus mauritiana</i>	<i>Ageratum conyzoides</i>	<i>Tamarindus indica</i>
24	<i>Phoenix sylvestris</i>	<i>Ziziphus glaberrima</i>	<i>Lantana camera</i>	Shrubs	Shrubs	<i>Alternanthera pungens</i>	<i>Tectona grandis</i>
25	<i>Pithecellobium dulce</i>	<i>Ziziphus mauritiana</i>	<i>Xanthium strumarium</i>	<i>Goniocalon glabrum</i>	<i>Ipomea aquatica</i>	<i>Blumea eriantha</i>	<i>Terminalia alata</i>
26	<i>Semecarpus anacardium</i>	Shrubs	Climbers	<i>Lantana camera</i>	<i>Lantana camera</i>	<i>Cassia tora</i>	<i>Woodfordia fruticosa</i>
27	<i>Soymida febrifuga</i>	<i>Lantana camera</i>	<i>Cocculus hirsutus</i>	<i>Xanthium strumarium</i>	<i>Xanthium strumarium</i>	<i>Goniocalon glabrum</i>	<i>Ziziphus glaberrima</i>
28	<i>Tamarindus indica</i>	<i>Xanthium strumarium</i>	<i>Coix lacryma-jobi</i>	<i>Ziziphus oenoplia</i>	<i>Ziziphus oenoplia</i>	<i>Hyptis suaveolens</i>	<i>Ziziphus mauritiana</i>
29	<i>Tectona grandis</i>	Climbers	<i>Hemidesmus indicus</i>	<i>Ziziphus xylopyrus</i>	Climbers	<i>Ocimum sanctum</i>	Shrubs
30	<i>Terminalia bellirica</i>	<i>Cocculus hirsutus</i>	<i>Ipomea quamoclit</i>	Climbers	<i>Combretum ovalifolium</i>	<i>Parthenium</i>	<i>Cappris zeylanica</i>
31	<i>Terminalia alata</i>	<i>Hemidesmus indicus</i>	Herbs	<i>Hemidesmus indicus</i>	<i>Cuscuta reflexa</i>	<i>Sida acuta</i>	<i>Lantana camera</i>
32	<i>Ziziphus glaberrima</i>	<i>Ipomea quamoclit</i>	<i>Ageratum conyzoides</i>	<i>Ipomea quamoclit</i>	<i>Hemidesmus indicus</i>	<i>Sida cordata</i>	<i>Malachra capitata</i>
33	<i>Ziziphus glaberrima</i>	Herbs	<i>Alternanthera pungens</i>	<i>Mucuna pruriens</i>	<i>Mucuna pruriens</i>	<i>Tridax procumbens</i>	Climbers
34	<i>Ziziphus mauritiana</i>	<i>Ageratum conyzoides</i>	<i>Blumea eriantha</i>	Herbs	Herbs	<i>Vernonia cinerea</i>	<i>Cocculus hirsutus</i>
	Shrubs	<i>Alternanthera pungens</i>	<i>Cassia tora</i>	<i>Ageratum conyzoides</i>	<i>Alternanthera pungens</i>	<i>Vicoa indica</i>	<i>Coix lacryma-jobi</i>
35	<i>Lantana camera</i>	<i>Blumea eriantha</i>	<i>Hyptis suaveolens</i>	<i>Alternanthera pungens</i>	<i>Blumea eriantha</i>	<i>Vinca rosea</i>	<i>Combretum ovalifolium</i>
36	<i>Xanthium strumarium</i>	<i>Cassia tora</i>	<i>Parthenium</i>	<i>Blumea eriantha</i>	<i>Cassia tora</i>	Grasses	<i>Hemidesmus indicus</i>
	Climbers	<i>Hyptis suaveolens</i>	<i>Sida acuta</i>	<i>Cassia tora</i>	<i>Celosia argentea</i>	<i>Cynodon dactylon</i>	<i>Ipomoea aquatica</i>
37	<i>Cocculus hirsutus</i>	<i>Parthenium</i>	<i>Sida cordata</i>	<i>Celosia argentea</i> or <i>C. cristata</i>	<i>Cyathocline purpuria</i>	<i>Hackelochloa granularis</i>	<i>Mucuna pruriens</i>
38	<i>Combretum ovalifolium</i>	<i>Sida acuta</i>	<i>Tridax procumbens</i>	<i>Hyptis suaveolens</i>	<i>Hyptis suaveolens</i>		Herbs
39	<i>Hemidesmus indicus</i>	<i>Sida cordata</i>	<i>Vernonia cinerea</i>	<i>Parthenium hysterophorus</i>	<i>Malachra capitata</i>		<i>Alternanthera pungens</i>
40	<i>Mucuna pruriens</i>	<i>Tridax procumbens</i>	<i>Vicoa indica</i>	<i>Sida acuta</i>	<i>Parthenium hysterophorus</i>		<i>Blumea eriantha</i>
	Herbs	<i>Vernonia cinerea</i>	Grasses	<i>Sida cordata</i>	<i>Sida acuta</i>		<i>Cassia tora</i>
41	<i>Alternanthera pungens</i>	<i>Vicoa indica</i>	<i>Apluda mutica</i>	<i>Tridax procumbens</i>	<i>Sida cordata</i>		<i>Celosia argentea</i>
42	<i>Blumea eriantha</i>	Grasses	<i>Hackelochloa granularis</i>	<i>Vernonia cinerea</i>	<i>Solanum xanthocarpum</i>		<i>Cyathocline purpuria</i>
43	<i>Cassia tora</i>	<i>Andropogon pumilus</i>	<i>Iseilema laxum</i>	<i>Vicoa indica</i>	<i>Tephrosia hamiltoni</i>		<i>Hyptis suaveolens</i>
44	<i>Celosia argentea</i>	<i>Apluda mutica</i>			<i>Tephrosia purpureai</i>		<i>Parthenium hysterophorus</i>
45	<i>Cyathocline purpuria</i>	<i>Coix lacryma-jobi</i>			<i>Tridax procumbens</i>		<i>Pennisetum hohenackeri</i>
46	<i>Hyptis suaveolens</i>	<i>Hackelochloa granularis</i>			<i>Vernonia cinerea</i>		<i>Sida acuta</i>
47	<i>Malachra capitata</i>	<i>Iseilema laxum</i>			Grasses		<i>Sida cordata</i>
48	<i>Parthenium hysterophorus</i>				<i>Andropogon pumilus</i>		<i>Solanum xanthocarpum</i>
49	<i>Sida acuta</i>				<i>Apluda mutica</i>		<i>Tephrosia purpureai</i>
50	<i>Sida cordata</i>				<i>Coix lacryma-jobi</i>		<i>Tridax procumbens</i>





51	<i>Solanum xanthocarpum</i>				<i>Eragrostiella bifaria</i>		<i>Typha angustata</i>
52	<i>Tephrosia hamiltoni</i>				<i>Iseilema laxum</i>		<i>Vernonia cinerea</i>
53	<i>Tephrosia purpureai</i>				<i>Pennisetum hohenackeri</i>		<i>Xanthium strumarium</i>
54	<i>Tridax procumbens</i>						Grasses
55	<i>Vernonia cinerea</i>						<i>Andropogon pumilus</i>
	Grasses						<i>Apluda mutica</i>
56	<i>Andropogon pumilus</i>						<i>Iseilema laxum</i>
57	<i>Apluda mutica</i>						
58	<i>Coix lacryma-jobi</i>						
59	<i>Eragrostiella bifaria</i>						
60	<i>Iseilema laxum</i>						
61	<i>Pennisetum hohenackeri</i>						

* **Comp.**-Compartment

Summary and Conclusions:

The proposed study of native plant species in and around Gorewada forest was conducted in total seven compartments. The dominant plant species observed in the Gorewada forest were *Acacia catechu*, *Acacia leucophloea*, *Acacia arabica*, *Acacia nilotica*, *Albizia odoratissima*, *Albizia lebbeck*, *Azadirachta indica*, *Bauhinia purpuria*, *Bauhinia racemosa*, *Bombox cieba*, *Butea monosperma*, *Cassia angustifolia*, *Cassia siamea*, *Cleistanthus collinus*, *Dendrocalamus strictus*, *Diospyros melanoxylon*, *Dulbergia sisso*, *Grewia tiliifolia*, *Hardwickia binata*, *Leucaena leucocephala*, *Maytenus emarginata*, *Mimosa hamata*, *Mitragyna perbifolia*, *Phienix sylvestris*, *Santallum album*, *Soymida febrifuga*, *Tamarindus indica*, *Tectona grandis*, *Termenelia bellirica*, *Terminalia alata*, *Ziziphus glaberrima*, *Ziziphus mauritiana*. Different types of herbs and shrubs were also found were *Alternanthera pungens*, *Blumea eriantha*, *Celosia argentea*, *Parthenium hysterophorus* (herbs) and the shrubs observed were *Xanthium strumarium*, *Lantana camera*. This study will be useful in determining the species diversity to characterize the structure of the community available in and around Gorewada International Zoo.

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