

**Mahatma Gandhi Arts, Science and Late N.P. Commerce College,  
Armori, Dist. – Gadchiroli (M.S.)**

**Department of Botany**

**Report on**

**Identification, Collection and Cultivation of Medicinal, Rare &  
Endangered Plant Species and Transfer of Knowledge to Students**

Gadchiroli district is located in north-eastern region of Maharashtra and has state boundaries with Telangana and Chhattisgarh. Total population of the district is 10,72,942. Male and female population is 5,41,328 and 5,31,614 respectively (As per Census 2011). ST population in the district is 4,15,306 (As per 2011 Census). The percentage of Scheduled Tribes community population that resides in the district is 38.7%. (As per Census 2011). The district is classified as tribal, undeveloped districts and most of the land is covered with forest and hills. Forests cover is over 76% of the district geographical area.

Gadchiroli district has a considerable plant diversity with variety of medicinal plants. The medicinal plants of Gadchiroli district are significant biological resources that are directly linked to health care, tradition, and culture. Plants were used to treat diseases since ancient times, and some of these herbal remedies are still used in the routine treatment of various problems. Natural health care practises such as tribal knowledge, domestic herbal therapy, and Ayurvedic knowledge are used to make the medicine available. For thousands of years, these plants have been planted in home garden or collected from forest, and traditional knowledge about the plants and their uses have been passed through generations to generation by the word of mouth.

The Department of Botany conducts a wild medicinal plant diversity survey on a regular basis. The survey is conducted based on participatory, observation and field visit to various remote and tribal area of the district. Major portion of the district is covered by forest and the chief vegetation type is dry-deciduous where Teak (*Tectona grandis*), Behara (*Chloroxylon swietenia*), Dhawada (*Anogeissus latifolia*), Ain (*Terminalia elliptica*) and Rohan (*Soymida febrifuga*) were found to be dominant species. Many plant species, such as *Andrographis paniculata*, *Chlorophytum arundinaceum*, *Cullen corylifolia*, *Curculigo orchioides*, *Cassia fistula*, *Helicteres isora*, *Holarrhena pubescens*, and *Pterocarpus marsupium*, are used for




medicinal purposes by the local tribal people. A total of 87 medicinal plant species and other rare and endangered species were identified namely *Drimia congesta* and *Chlorophytum tuberosum*, *Globba orixensis*, *Pancratium zeylanicum*, *Pancratium verecundum*, *Uraria picta*, *Zingiber capitatum*, *Zingiber roseum* etc. The main aim of this survey is to gather information about medicinal plants found in rural and tribal areas in order to conserve their significant bio-resources. All medicinal plants have antimalarial, antifungal and antibacterial activities and are used against skin disease, diarrhoea and dysentery, cough, asthma, fever etc.

Due to increasing export demand, the local people's dependency on the local herbal flora and their well-understood faith in the traditional Ayurvedic medical tradition would go a long way toward marketing and selling wild plants. As a result of overharvesting, habitat degradation, increase urbanisation, and decreasing forest areas, medicinal plant populations in the wild habitat have irreversibly reduced, resulting in a decline in raw material volume. Plants with medicinal value, such as Hirda, Bhuineem, and Tarota, etc. are illegally exported. Due to modernization and the availability of alternatives disease treatment methods most of the traditional knowledge is being lost. Therefore, the botany department has taken an initiative and developed a *Herbal (Medicinal) Botanical Garden in the college campus where 47 medicinal, rare and endangered plant species are cultivated. Department also hold herbarium sheet of more than 228 species.* Also, conservation programme for rare and endangered plants found in the district is conducted with the aim of encouraging students to understand the ancient knowledge and tradition linked with these resources, assisting them in understanding the tremendous future prospects of local wild medicinal plants, and creating interest in the subject and awareness among students. Some rare and endangered plant species *Drimia congesta* and *Chlorophytum arundinaceum*, *Globba orixensis*, *Pancratium zeylanicum*, *Pancratium verecundum*, *Uraria picta*, *Zingiber capitatum*, *Zingiber roseum* etc. are grown and conserved in herbal botanical garden.

The Botany department has started a Herbal Medicine Certificate Course in the department to pass on field knowledge, local traditional knowledge, uses and importance of plants to the students, in which they make herbal products (*Satavari Kalpa*, *Adulsa Kalpa*) in the lab using plants from the garden.

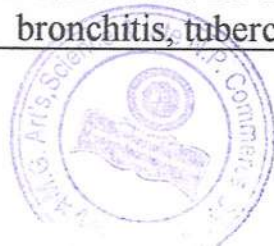
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**List of Plant Cultivated in Herbal (Medicinal) Botanical Garden**

Sr. No.	Particulars
1.	<b>Botanical Name</b> :- <i>Abrus precatorius</i> L. <b>Family</b> :- Fabaceae <b>Local Name</b> :- Gunj <b>Uses</b> :- The leaves of the herb are used to cure fever, cough and cold. Paste of roots is administered to cure abdominal pains, tumors.
2.	<b>Botanical Name</b> :- <i>Abutilon indicum</i> (L.) Sweet. <b>Family</b> :- Malvaceae <b>Local Name</b> :- Bala <b>Uses</b> :- Roots are used in treatment of leprosy, liver disorders, ulcers, headache etc.
3.	<b>Botanical Name</b> :- <i>Acacia concinna</i> DC. <b>Family</b> :- Mimosaceae <b>Local Name</b> :- Sikakai <b>Uses</b> :- Plant extracts are used in natural shampoos or hair powders.
4.	<b>Botanical Name</b> :- <i>Adhatoda zeylanica</i> Medic. <b>Family</b> :- Acanthaceae <b>Local Name</b> :- Adulsa <b>Uses</b> :- Leaf juice used for cough and asthma.
5.	<b>Botanical Name</b> :- <i>Alpinia galangal</i> Swartz <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- Veloda <b>Uses</b> :- Rhizome used traditionally for hiccups, nausea, vomiting, chronic gastritis and ulcers in the digestive tract.
6.	<b>Botanical Name</b> :- <i>Andrographis paniculata</i> (Burm.f.) Wall ex Nees <b>Family</b> :- Acanthaceae <b>Local Name</b> :- Kalmegh, Bhuineem <b>Uses</b> :- Whole plant is used for the treatment for malaria and typhoid.
7.	<b>Botanical Name</b> :- <i>Asparagus racemosus</i> Wild. <b>Family</b> :- Liliaceae <b>Local Name</b> :- Shatavari <b>Uses</b> :- It is also used for fluid retention, pain, cancer, diarrhea, bronchitis, tuberculosis, dementia, and diabetes.



8.	<b>Botanical Name</b> :- <i>Baliospermum montanum</i> (Willd.) Muell-Arg. <b>Family</b> :- Euphorbiaceae <b>Local Name</b> :- Jamal-gota <b>Uses</b> :- Root decoction used for stomach pain due to indigestion or constipation, Scanty urination, dropsy, skin diseases.
9.	<b>Botanical Name</b> :- <i>Bixa orellana</i> L. <b>Family</b> :- Bixaceae <b>Local Name</b> :- Shendri <b>Uses</b> :- It is used for natural food colouring.
10.	<b>Botanical Name</b> :- <i>Brachystelma gondwanense</i> Govekar, Kahalkar & Sardesai <b>Family</b> :- Asclepiadaceae <b>Local Name</b> :- It is new species first time reported from Lohara (Gadchiroli). It is rare species.
11.	<b>Botanical Name</b> :- <i>Buddleja asiatica</i> Lour. <b>Family</b> :- Buddlejaceae <b>Local Name</b> :- Buddleja <b>Uses</b> :- The juice of the plant is applied as a wash to treat skin diseases.
12.	<b>Botanical Name</b> :- <i>Cassia fistula</i> L. <b>Family</b> :- Caesalpiniaceae <b>Local Name</b> :- Bahava <b>Uses</b> :- It is used for healing of wounds, skin diseases, fruit for abdominal pain.
13.	<b>Botanical Name</b> :- <i>Calotropis gigantea</i> (Ait.) R. Br. <b>Family</b> :- Asclepidaceae <b>Local Name</b> :- Rui <b>Uses</b> :- Flower ash is used in asthma and bronchitis.
14.	<b>Botanical Name</b> :- <i>Caesalpinia bonduce</i> (L.) Roxb. <b>Family</b> :- Caesalpiniaceae <b>Local Name</b> :- Sagargoti <b>Uses</b> :- Seed powder is used for menorrhagia, also used for abortion.
15.	<b>Botanical Name</b> :- <i>Celastrus paniculatus</i> Willd. <b>Family</b> :- Celastraceae <b>Local Name</b> :- Malkanguni <b>Uses</b> :- Seed oil is used for paralysis and intellect promoting and sores.
16.	<b>Botanical Name</b> :- <i>Chlorophytum arundinaceum</i> Baker



	<b>Family</b> :- Liliaceae <b>Local Name</b> :- Musali <b>Uses</b> :- Root use as a remedy for diabetes, arthritis and increasing body immunity, curative for natal and postnatal problems, for rheumatism and joint pains, increase lactation in feeding mothers.
17.	<b>Botanical Name</b> :- <i>Chlorophytum laxum</i> R. Br. <b>Family</b> :- Liliaceae <b>Local Name</b> :- -- <b>It is rare species.</b>
18.	<b>Botanical Name</b> :- <i>Chlorophytum tuberosum</i> (Roxb.) Baker <b>Family</b> :- Liliaceae <b>Local Name</b> :- Musali <b>Uses</b> :- In India the roots are dried and used as a popular tonic and aphrodisiac in Ayurvedic medicine. Roots are used in strengthening body immunity system.
19.	<b>Botanical Name</b> :- <i>Clerodendrum viscosum</i> Vent. <b>Family</b> :- Verbenaceae <b>Local Name</b> :- Khadu chaka <b>Uses</b> :- Seeds and leaves used as herbal remedy for, <u>asthma</u> , <u>cough</u> , <u>diarrhoea</u> , <u>rheumatism</u> , <u>fever</u> and <u>skin diseases</u> .
20.	<b>Botanical Name</b> :- <i>Clitoria ternatea</i> L. <b>Family</b> :- Fabaceae <b>Local Name</b> :- Aprajit <b>Uses</b> :- Roots used for swelling and pain.
21.	<b>Botanical Name</b> :- <i>Costus speciosus</i> (Koen.) J. E. Smith <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- Kewakanda <b>Uses</b> :- Tuber are used for to treat arthritis, leprosy, skin diseases.
22.	<b>Botanical Name</b> :- <i>Curcuma caesia</i> Roxb. <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- Kali-haldi <b>Uses</b> :- Fresh and dried rhizome is used in the treatment of leukoderma, asthma, tumours, piles etc.
23.	<b>Botanical Name</b> :- <i>Cymbopogon citratus</i> (DC.) Stapf <b>Family</b> :- Poaceae <b>Local Name</b> :- Gavati Chaha <b>Uses</b> :- Lemongrass leaves are commonly used as lemon flavouring in Herbal tea. It is also used in manufacturing deodorants, soaps and cosmetics.
24.	<b>Botanical Name</b> :- <i>Datura inoxia</i> Mill. <b>Family</b> :- Solanaceae



	<b>Local Name</b> :- Dhotara <b>Uses</b> :- The leaves of Dhotra mixed with mustard oil then it is useful in skin disorders.
25.	<b>Botanical Name</b> :- <i>Desmodium gangeticum</i> (L) DC. <b>Family</b> :- Fabaceae <b>Local Name</b> :- Salperni <b>Uses</b> :- plant used control inflammation, fever and neurological imbalances.
26.	<b>Botanical Name</b> :- <i>Drimia congesta</i> (Wight) Ansari & Raghavan <b>Family</b> :- Liliaceae <b>Local Name</b> :- Ran kanda It is endangered species.
27.	<b>Botanical Name</b> :- <i>Geodorum densiflorum</i> (Lam.) Schltr. <b>Family</b> :- Orchidaceae <b>Local Name</b> :- Haryakand
28.	<b>Botanical Name</b> :- <i>Globba orixensis</i> Roxb., <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- It is rare species.
29.	<b>Botanical Name</b> :- <i>Gloriosa superba</i> L. <b>Family</b> :- Liliaceae <b>Local Name</b> :- Kar-Kari <b>Uses</b> :- It is used in the treatment of snake bite, ulcer, gout and kidney problems.
30.	<b>Botanical Name</b> :- <i>Hibiscus rosa-sinensis</i> L. <b>Family</b> :- Malvaceae <b>Local Name</b> :- Jaswand
31.	<b>Botanical Name</b> :- <i>Leea macrophylla</i> Roxb. ex Hornem. <b>Family</b> :- Leeaceae <b>Local Name</b> :- Dara cettu It is rare species.
32.	<b>Botanical Name</b> :- <i>Mimosa pudica</i> L. <b>Family</b> :- Mimosaceae <b>Local Name</b> :- Lajalu <b>Uses</b> :- It is used for the treatment of urogenital disorder, piles, dysentery and fever.
33.	<b>Botanical Name</b> :- <i>Morus alba</i> L. <b>Family</b> :- Moraceae <b>Local Name</b> :- Tuthi <b>Uses</b> :- Mulberry fruit is used to treat weakness, dizziness, tinnitus, fatigue and anemia.
34.	<b>Botanical Name</b> :- <i>Nephrolepis exaltata</i> <b>Family</b> :- Nephrolepidaceae




	<b>Local Name</b> :- Fern
35.	<b>Botanical Name</b> :- <i>Ocimum sanctum</i> L. <b>Family</b> :- Lamiaceae <b>Local Name</b> :- Tulsi <b>Uses</b> :- The plant is used to treat respiratory problems, to cure fever, Common cold and sore throat etc.
36.	<b>Botanical Name</b> :- <i>Pancreatium zeylanicum</i> L. <b>Family</b> :- Amaryllidaceae <b>Local Name</b> :- Ran-kanda It is rare species.
37.	<b>Botanical Name</b> :- <i>Pancreatium verecundum</i> Aiton <b>Family</b> :- Amaryllidaceae <b>Local Name</b> :- Ran-kanda It is rare species.
38.	<b>Botanical Name</b> :- <i>Plumbago zeylanica</i> L. <b>Family</b> :- Plumbaginaceae <b>Local Name</b> :- Chitarak <b>Uses</b> :- Root used for treatment of various diseases related to digestive system like weak digestion, piles, abdominal pain, skin diseases.
39.	<b>Botanical Name</b> :- <i>Rauwolfia serpentine</i> (L.) Bth. ex Kurz. <b>Family</b> :- Apocynaceae <b>Local Name</b> :- Sarpagandha <b>Uses</b> :- Root used for treatment of <u>high blood pressure</u> and mental disorders.
40.	<b>Botanical Name</b> :- <i>Rosa indica</i> L. <b>Family</b> :- Rosaceae <b>Local Name</b> :- Gulab <b>Uses</b> :- The rose extract or oil has extreme use in cosmetic industry as an ingredient of soap, body wash, perfumes, body spray etc.
41.	<b>Botanical Name</b> :- <i>Thuja</i> sp. <b>Family</b> :- Cupressaceae <b>Local Name</b> :- Vidya
42.	<b>Botanical Name</b> :- <i>Tinospora cordifolia</i> (Willd.) Miers. <b>Family</b> :- Menispermaceae <b>Local Name</b> :- Gulvel <b>Uses</b> :- It is used for the treatment of Jaundice, Diabetes, fever and as used an immunostimulant etc.
43.	<b>Botanical Name</b> :- <i>Tylophora indica</i> (Burm.f.) Merr. <b>Family</b> :- Asclepidaceae <b>Local Name</b> :- Anantmul/Potmari <b>Uses</b> :- Roots are used for snake bite and ashthma



44.	<b>Botanical Name</b> :- <i>Uraria picta</i> (Jacq.) Desv. ex DC. Prodr. <b>Family</b> :- Fabaceae <b>Local Name</b> :- Pitwan <b>Uses</b> :- Root is locally used against snake bite. The plant decoction is used for bleeding piles, cough etc.
45.	<b>Botanical Name</b> :- <i>Vetiveria zizanioides</i> (L.) Nash <b>Family</b> :- Poaceae <b>Local Name</b> :- Khas <b>Uses</b> :- Vetiver oil is used in perfume extensive application in soap and cosmetic industries. It is used for anthelmintic for children and skin disorders.
46.	<b>Botanical Name</b> :- <i>Zingiber capitatum</i> Roxb. <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- Kali halad <b>Uses</b> :- Rhizomes are used as antiseptics and in skin care.  It is rare species.
47.	<b>Botanical Name</b> :- <i>Zingiber roseum</i> (Roxb.) Roscoe <b>Family</b> :- Zingiberaceae <b>Local Name</b> :- ---- It is rare found in Eastern Vidarbha.

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**Photographs of survey, identification and collection of plant species**



  
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Latitude: 20.539808  
Longitude: 80.042023  
Elevation: 283.88 m  
Accuracy: 1.3 m  
Time: 03-04-2021 11:44  
Note: pbr



Latitude: 20.539637  
Longitude: 80.041582  
Elevation: 286.68 m  
Accuracy: 1.3 m  
Time: 03-04-2021 12:03  
Note: pbr



  
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## Herbal (Medicinal) Botanical Garden Photographs



  
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Latitude: 20.473962  
Longitude: 79.979237  
Elevation: 295.88±4 m  
Accuracy: 1.5 m  
Time: 08-23-2021 10:07  
Note: Botanical garden

Powered by NoteCam




Latitude: 20.47401  
Longitude: 79.979212  
Elevation: 69.98±25 m  
Accuracy: 71.9 m  
Time: 07-26-2021 12:03  
Note: observations of plant

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Latitude: 20.473928  
Longitude: 79.979222  
Elevation: 231.03±3 m  
Accuracy: 11.7 m  
Time: 06-22-2021 15:36  
Note: observattino in garden

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Latitude: 20.473968  
Longitude: 79.979271  
Elevation: 299.83±4 m  
Accuracy: 3.0 m  
Time: 08-11-2021 11:59  
Note: Uraria picta

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Latitude: 20.473963  
Longitude: 79.979257  
Elevation: 300.39±4 m  
Accuracy: 1.8 m  
Time: 08-11-2021 11:53  
Note: Uroraria picta



Latitude: 20.473966  
Longitude: 79.97922  
Altitude: 158.3±2 m  
Accuracy: 8.2 m  
Time: 01-01-2022 12:36  
Note: garden



  
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## Photographs of Students Making Products from Herbal Medicinal Plants



  
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