



The diversity of flora within the Government P.G. College, Noida campus

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Abstract

Documenting campus flora is a vital step in understanding biodiversity, maintaining ecological balance, and promoting sustainable resource management. This study presents a comprehensive survey of plant species recorded within the campus of the Government P.G. College Noida, Uttar Pradesh, India. A total of 152 species were identified, representing 59 botanical families. Among 59 families, 4 belong to Gymnosperms, 11 to Monocotyledons, and 44 to Dicotyledons angiosperms. The flora includes trees (52), shrubs (35), herbs (60), and climbers (4) and one parasitic plant. Dominant families such as Euphorbiaceae (12) Moraceae (9), Asteraceae (9), Apocyanaceae (7), Fabaceae (7), and Caesalpiniaceae (7) highlight the diversity of functional groups and ecological roles. The study emphasizes the medicinal, ornamental, and economic importance some of species such as *Azadirachta indica*, *Ocimum sanctum*, *Cassia fistula*, *Rauvolfia serpentina*, *Terminalia Arjuna* and *Bougainvillea spectabilis*. Invasive species like *Parthenium hysterophorus* and *Lantana camara* were also recorded, underscoring challenges to native biodiversity. The findings contribute to regional biodiversity databases, provide a foundation for conservation strategies, and highlight the role of institutional campuses as biodiversity refuges in urban landscapes. This research enriches ecological knowledge, fosters environmental awareness, and supports sustainable development initiatives in the National Capital Region.

Keywords: Flora documentation, biodiversity, Govt. P.G. college noida, conservation strategies

Introduction

Biodiversity is the foundation of ecological resilience and human well-being. Plants, as primary producers, form the basis of terrestrial ecosystems, providing food, oxygen, shelter, and raw materials for countless organisms, including humans. India is recognized as one of the world's mega-diverse countries, supporting nearly 47,000 plant species, due to its wide range of climatic, edaphic, and physiographic conditions (Singh *et al.*, 2001) [32]. They regulate climate, maintain soil fertility, and contribute to the hydrological cycle. Documenting local flora is therefore a critical scientific endeavour, as it helps in understanding ecological dynamics, conserving species, and promoting sustainable development.

The study of flora in institutional campuses has gained prominence in recent years. College and university campuses often serve as biodiversity refuges within urban landscapes. They harbour native species, introduced ornamentals, and medicinal plants, thereby acting as microcosms of regional biodiversity. Such documentation not only enriches academic knowledge but also fosters environmental awareness among students and the community. In this regard, the flora survey of Govt. P.G. College Noida is a significant contribution to the biodiversity records of the National Capital Region (NCR). Noida, located in Gautam Buddha Nagar district of Uttar Pradesh, is a planned city within the NCR. The region is characterized by a subtropical climate, with hot summers (April–June), monsoon rains (July–September), and cool winters (November–February). Average annual rainfall ranges between 800–1000 mm, supporting diverse vegetation. The soil is predominantly alluvial, enriched by the Yamuna River system, which provides fertile ground for agriculture and natural vegetation.

Urbanization poses significant challenges to biodiversity. Globally, urbanization is increasing, resulting in smaller

habitats and greater spatial isolation (Ramakrishnan *et al.*, 2017) [21]. Habitat fragmentation, pollution, and the introduction of invasive species threaten native flora. In Noida, rapid infrastructural development has led to the loss of natural habitats. However, institutional campuses like the Government P.G. College serve as a biodiversity refuge, mitigating the adverse effects of urbanization. By maintaining diverse plant species, these campuses contribute to ecological stability and provide educational opportunities for biodiversity conservation. Documenting campus flora has educational and cultural dimensions. For students, it provides hands-on learning opportunities in botany, ecology, and environmental science. It fosters appreciation for nature and promotes sustainable practices. Culturally, many plants hold symbolic significance in Indian traditions. Several district floras and other publications have been brought out by different workers on plant diversity of Uttar Pradesh (Panigrahi & Ram Saran, 1967; Singh, 1969; Sharma & Dhakre, 1978; Paliwal & Singh, 1982; Singh, 1994; Singh & Khanuja, 2006; Mishra & Pal, 2010; Narain, 2010; Kishore *et al.* 2011; Mishra *et al.* 2015; Maurya *et al.* 2015, Arvind Singh, 2015; Ansari *et al.* 2016) [1, 2, 8, 14, 15, 16, 17, 18, 19, 27, 30, 31, 34].

Several studies (Renukarya *et al.* 2015; Kumar *et al.* 2016; Rao and Udapure, 2018; Rao *et al.* 2017; M. H. Dar, 2019; Lalit Kumar 2020; Barik *et al.* 2023; Saranya *et al.* 2023; Patil *et al.* 2024) [3, 9, 10, 20, 22, 24, 26] have emphasized the importance of documenting flora in urban and institutional Campuses. Sharma and Balakrishnan (1993) [28] highlighted the diversity of the Indian flora, emphasizing the importance of regional surveys for conservation. Singh and Jain (2000) [33] [33] documented the flora of Uttar Pradesh, providing a baseline for local studies. Reddy *et al.* (2008) [23] reviewed invasive alien species in India, underscoring their ecological impact. Santapau (1958) suggested that "Our universities can do excellent work in the selected areas in the

neighbourhood of their headquarters.” Similar suggestions and recommendations were also made by Maheshwari (1975) ^[12] in the silver jubilee volume of “Botanica”. For future urban forestry, the institutions in the area must provide useful knowledge on protecting huge trees as well as enhancing age structure, standards, and planning management to botany and horticulture students (Lindenmayer and Laurance, 2016) ^[11]. Innovative practices like creating seed banks, vermicomposting, and water conservation measures further demonstrate how campuses can lead by example in sustainability. These studies provide a framework for the present research, situating it within broader biodiversity documentation efforts.

Conservation of flora is essential to sustain life on Earth. It involves protecting natural habitats, restoring degraded ecosystems, and promoting sustainable use of plant resources. Global initiatives like the establishment of protected areas, seed banks, and reforestation projects aim to preserve plant diversity for future generations. College campuses play a pivotal role in the conservation of flora by acting as hubs for biodiversity, research, and community awareness. These campuses often encompass large green spaces that serve as mini ecosystems, hosting a variety of plant species, including rare and indigenous ones. By maintaining green cover, nurturing botanical gardens, and implementing sustainable landscaping practices, colleges contribute to preserving plant diversity and combating environmental degradation. Beyond physical conservation, campuses are ideal platforms for education and advocacy. Students, as future decision-makers, can engage in research, tree plantation drives, and awareness campaigns to understand and address ecological challenges. Thus, college campuses not only provide a sanctuary for flora but also serve as centres for fostering an environmentally conscious culture, playing a vital role in the global effort to conserve plant life.

The primary objectives of documenting the flora of Govt. P.G. College Noida are:

1. To identify and classify plant species present within the campus, based on botanical nomenclature, family, habit, and habitat.
2. To analyse species diversity in terms of trees, shrubs, herbs, climbers, and aquatic plants.
3. To highlight the ecological, medicinal, and ornamental significance of the recorded species.
4. To identify invasive species and assess their impact on native biodiversity.
5. To contribute to regional biodiversity databases and provide a foundation for conservation strategies.

Material Methods

The present study focuses on Government Post Graduate College, Noida, Gautam Buddha Nagar, U.P., India. It is located in Sector 39 within the Gautam Buddha Nagar district of Uttar Pradesh and was established in 1982. The college is one of the many green enclaves. The campus spans 59829.90 square meters and is situated between 28.5725° N latitude and 77.3547° E longitude. Gautam Buddha Nagar experiences an extreme climate with hot summers, monsoon season, and cold winters. The average annual rainfall is approximately 800–1000 mm, supporting a variety of vegetation. Some plants grow naturally, while others- such as trees, shrubs, herbs, and palms- have been planted intentionally to control pollution and beautify the campus.

Collection of plants

The flora is critically surveyed across the college campus during year 2024. The plant specimens were collected in polythene bags to prevent desiccation. The plant data like habit, family, phenology, and parts used were noted down in the field book.

Preservation of Plants

Each identified species was thoroughly pressed in a plant press, then dried and mounted on herbarium sheets. To prevent damage to the specimens from microorganisms such as fungi and insects, all dried specimens were treated by immersing the entire plant in a solution of mercuric chloride in ethyl alcohol (115 g mercuric chloride dissolved in 4.5 liters of ethyl alcohol, called Kew Mixture). After all specimens were fully treated, they were dried again and affixed, along with a label on a mounting sheet measuring 28 cm x 42 cm.

Identification and Classification

Identification of flora was done with the help of relevant literature, standard floras, and keys (Flora of Uttar Pradesh, Flora of Delhi and Indian Medicinal Plants). Digital photographs were taken for some of the flora. All the studied plant species have been arranged alphabetically, along with their family, binomial, and vernacular names. The families are arranged according to Bentham and Hooker's system of classification (Bentham G., Hooker J.D., 1876) ^[4].

Result and discussion

From Table 1, it is evident that a total of 152 plant species were documented, representing to 134 genera and 59 families. Among the recorded 59 families, 4 families (Araucariaceae, Cycadaceae, Cupressaceae and Zamiaceae) belong to Gymnosperms, and the remaining 55 families belong to Angiosperms, consisting of 11 monocot families and 44 dicot families. Five species, ie *Araucaria heterophylla*, *Cycas revoluta*, *Juniper chinensis*, *Thuja occidentalis* and *Zamia furfuracea* are represented by Gymnosperms. The flora includes native species, ornamentals, wild plants, medicinal plants, and introduced exotics. The flora is dominated by families that typically flourish in urban North Indian campuses: Euphorbiaceae (12 species), Asteraceae (9 species), Moraceae (9 species), Apocyanaceae (7species), Fabaceae (7 species), Caesalpiniaceae (7 species), Amaranthaceae (6 species), Malvaceae (5 species), Poaceae (4 species) and Liliaceae (4 species) (table 3). The maximum no. of species is recorded in the Euphorbiaceae family, 28 families are represented by solitary species, 12 families are represented by 2 species, 9 families are represented by 3 species, and 3 families are represented by 4 species. Among the generic-wise distribution, genus *Acacia*, *Allium*, *Cassia*, *Crimum*, *Dracaena*, *Evolvulus*, and *Portulaca* are represented by 2 species, *Alternanthera* by 3, *Euphorbia* by 4, *Ficus* by 7, and the rest of the genera are represented by a single species.

Documented flora is a diverse assemblage spanning terrestrial herbs, trees, shrubs, climbers and a few aquatic/parasitic species (table 2). Herbs form the dominant habit represented by 39% with 60 species, followed by trees 34% with 52 species, shrubs 23% with 35 species, climbers

0.26% with 4 species, parasitic plant 0.06% with a single species. Representative examples include:

- **Trees:** *Azadirachta indica*, *Cassia fistula* *Ficus benghalensis*, *Ficus religiosa*, *Dalbergia sissoo*, *Tectona grandis*, *Delonix regia*, *Polyalthia longifolia*, *Terminalia arjuna*, *Terminalia bellirica*, *Bauhinia purpurea*, *Pongamia pinnata*, *Jacaranda mimosifolia*, *Grevillea robusta*.
- **Shrubs:** *Bougainvillea spectabilis*, *Duranta erecta*, *Hamelia patens*, *Jatropha integerrima*, *Euphorbia milii*, *Lawsonia inermis*, *Codiaeum* spp., *Clerodendrum inerme*, *Rhapis excelsa*, *Thuja occidentalis*.
- **Herbs (including medicinal/culinary and weeds):** *Ocimum sanctum*, *Rauvolfia serpentina*, *Curcuma longa*, *Ageratum conyzoides*, *Aloe barbadense*, *Parthenium hysterophorus*, *Chenopodium album*, *Eclipta alba*, *Tridax procumbens*, *Euphorbia hirta*, *Amaranthus viridis*, *Cynodon dactylon*, *Dactyloctenium aegyptium*, *Mazus pumilus*.
- **Climbers:** *Combretum indicum*, *Tinospora cordifolia*, *Selenicereus undatus*; parasite: *Cuscuta reflexa*; aquatic: *Lemna perpusilla*.

Trees such as *Ficus religiosa* (Peepal), *Azadirachta indica* (Neem), and *Mangifera indica* (Mango), *Dalbergia sissoo*, *Pongamia pinnata*, and *Terminalia arjuna* serve as keystone species, providing shade, oxygen, dust interception, and microhabitats for avian species, insects, and small mammals. Their presence contributes to carbon sequestration, mitigating the effects of urban pollution and climate change (Singh and Kaushik 2022) [29].

Herbs like *Ocimum sanctum* (Tulsi) and *Eclipta Alba* (Bhringraj) are not only culturally significant but also contribute to soil stabilization and nutrient cycling. Shrubs such as *Bougainvillea spectabilis* and *Hibiscus rosa-sinensis* enhance the aesthetic appeal of the campus, while also supporting pollinators like bees and butterflies. Climbers, though fewer in number, add vertical diversity, creating ecological niches and supporting ornamental landscaping. Aquatic and parasitic species, though rare, demonstrate niche adaptations. *Lemna perpusilla* (Duckweed) plays a role in nutrient cycling in aquatic habitats, while *Cuscuta reflexa* (Dodder) illustrates parasitic interactions within plant communities. These species highlight the ecological complexity of the campus flora.

The flora includes numerous medicinal plants that are integral to traditional healthcare systems in India. For instance: *Azadirachta indica* (Neem): Known for its antibacterial, antifungal, and antiviral properties, Neem is widely used in Ayurvedic medicine for treating skin disorders, dental issues, and infections. *Ocimum sanctum* (Tulsi): Revered as a sacred plant, Tulsi is used for respiratory ailments, stress relief, and immune system enhancement. *Tinospora cordifolia* (Giloy): Recognized for its immunomodulatory properties, Giloy is used to treat fever, diabetes, and inflammatory conditions. *Rauvolfia serpentina* (Sarpagandha): A source of alkaloids like reserpine, it is used in the treatment of hypertension and mental disorders. *Curcuma longa* (Turmeric): Known for its anti-inflammatory and antioxidant properties, turmeric is a staple in both culinary and medicinal practices. *Terminalia Arjuna*: Known for its cardioprotective properties, it strengthens heart muscles and helps manage hypertension

and cholesterol. *Emblica officinalis*: Rich in vitamin C and antioxidants, it boosts immunity and aids digestion while supporting skin health. *Kigelia africana*: Traditionally used for skin ailments; its extracts have antimicrobial and anti-inflammatory properties beneficial for dermatological care. The presence of these plants underscores the medicinal richness of the campus flora, offering opportunities for ethnobotanical studies and integration into healthcare practices.

Ornamental plants contribute significantly to the aesthetic and cultural dimensions of the campus. Species such as *Bougainvillea spectabilis*, *Lagerstroemia speciosa*, *Plumeria Alba*, *Callistemon citrinus* (Bottlebrush), and *Hibiscus rosa-sinensis* are widely cultivated for their vibrant flowers, enhancing the visual appeal of the landscape. Cultural associations further enrich their significance. *Ficus religiosa* (Peepal): Revered in Hinduism and Buddhism, symbolizing enlightenment and spiritual growth. *Ocimum sanctum* (Tulsi): Considered sacred in Hindu households, often worshipped daily. *Santalum album* (Sandalwood): Valued for its fragrance and religious use in rituals. *Nyctanthes arbortristis* (Harsingar): Associated with mythology and used in traditional ceremonies. These cultural associations link biodiversity with heritage, reinforcing the importance of conserving such species. Several species documented in the campus flora have direct economic value. Fruit-bearing trees like *Mangifera indica* (Mango), *Psidium guajava* (Guava), *Musa paradisiaca*, *Punica granatum* and *Manilkara zapota* provide nutritional and economic benefits. Timber species such as *Delbergia sissoo* and *Tectona grandis* are valuable for furniture and construction. Fiber and utility plants like *Bambusa vulgaris* (Bamboo) and *Agave Americana* (Century Plant) contribute to handicrafts and industrial uses. The economic dimension of flora highlights the multifaceted benefits of biodiversity, extending beyond ecological and cultural significance.

The presence of invasive species such as *Parthenium hysterophorus* and *Lantana camara* poses ecological challenges. These species are known to compete with native plants for resources, alter soil chemistry, reduce fertility, disrupt pollination networks by attracting or repelling pollinators, and cause health issues in humans and livestock (e.g., *Parthenium dermatitis*). Managing invasive species requires integrated strategies, including mechanical removal, biological control, and awareness campaigns. The identification of such species in the campus flora underscores the need for proactive management to preserve native biodiversity.

Documenting campus flora has significant educational implications. It provides students with hands-on learning opportunities in botany, ecology, and environmental science. It fosters appreciation for nature and promotes sustainable practices. By integrating flora documentation into the curriculum, institutions can cultivate environmental consciousness among students, preparing them to address ecological challenges in the future.

The study of campus flora extends beyond academic boundaries. It contributes to regional biodiversity databases, informing conservation policies and urban planning. It supports sustainable development by highlighting the ecological, medicinal, and economic value of biodiversity. It reinforces cultural heritage by documenting species with religious and symbolic significance. In the context of global biodiversity loss, such studies are vital for preserving ecological integrity and promoting human well-being.

Table 1: List of Flora within Govt. P.G. College, Noida

S. No.	Botanical name	Common Name	Family	Habit	Habitat
1	<i>Abutilon indicum</i> (Linn.) Sweet	Indian Mallow	Malvaceae	Herb	Terrestrial
2	<i>Acacia mearnsii</i> De Willd.	Australian acacia	Caesalpiniaceae	Tree	Terrestrial
3	<i>Acacia nilotica</i> (L.) Delile	kikar, babul	Mimosaceae	Tree	Terrestrial
4	<i>Acalypha indica</i> L.	Indian Copperleaf	Euphorbiaceae	Herb	Terrestrial
5	<i>Achyranthes aspera</i> L.	Chirchita	Amaranthaceae	Herb	Terrestrial
6	<i>Aegle marmelos</i> (L.) Correa	Bel	Rutaceae	Tree	Terrestrial
7	<i>Agave americana</i> L.	century plant	Agavaceae	Herb	Terrestrial
8	<i>Ageratum conyzoides</i> L.	Billygoat weed	Asteraceae	Herb	Terrestrial
9	<i>Alium sativum</i> L.	Garlic	Liliaceae	Herb	Terrestrial
10	<i>Allium cepa</i> L.	Onion	Liliaceae	Herb	Terrestrial
11	<i>Alostonia scholaris</i> (L.) R. Br.	Satparni	Apocynaceae	Tree	Terrestrial
12	<i>Alternanthera dentate</i> (Moench) Stuehlik ex R.E.Fr.	Lalsa	Amaranthaceae	Herb	Terrestrial
13	<i>Alternanthera paronychioides</i> A.St.-Hil.	Smooth Joyweed	Amaranthaceae	Herb	Terrestrial
14	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC	sessile joyweed	Amaranthaceae	Herb	Terrestrial
15	<i>Amaranthus viridis</i> L.	Green amaranth	Amaranthaceae	Herb	Terrestrial
16	<i>Anagallis arvensis</i> L.	scarlet pimpernel	Primulaceae	Herb	Terrestrial
17	<i>Aloe barbedense</i> Mill.	Aloe	Liliaceae	Herb	Terrestrial
18	<i>Araucaria heterophylla</i> Pav.	monkey puzzle tree	Araucariaceae	Tree	Terrestrial
19	<i>Argemone Mexicana</i> L.	Mexican prickly poppy	Papaveraceae	Herb	Terrestrial
20	<i>Artocarpus heterophyllus</i> Lam.	Jackfruit	Moraceae	Tree	Terrestrial
21	<i>Asparagus racemosus</i> Willd.	Shatavari	Liliaceae	Herb	Terrestrial
22	<i>Azadirachta indica</i> A.Juss.	Neem	Meliaceae	Tree	Terrestrial
23	<i>Bambusa vulgaris</i> Schard.ex J.C.Wendl.	Bamboo	Poaceae	Shrub	Terrestrial
24	<i>Basella rubra</i> L.	Poi, Malabar spinach	Basellaceae	Herb	Terrestrial
25	<i>Bauhinia purpurea</i> L.	Kachnar	Caesalpiniaceae	Tree	Terrestrial
26	<i>Boerhavia diffusa</i> L.	Punarnava	Nyctaginaceae	Herb	Terrestrial
27	<i>Bombax cieba</i> L.	Semal	Malvaceae	Tree	Terrestrial
28	<i>Bougainvillea spectabilis</i> Willd.	Booganbel	Nyctaginaceae	Shrub	Terrestrial
29	<i>Butea monosperma</i> (Lam.)Taub	Flame of forest	Fabaceae	Tree	Terrestrial
30	<i>Calliandra haematocephala</i> Hassk.	Powder puff plant	Mimosaceae	Shrub	Terrestrial
31	<i>Callistimon citrinus</i> (Curtis) Skeels	Bottle brush	Myrtaceae	Tree	Terrestrial
32	<i>Calotropis procera</i> (Aiton) Dryand.	Milk weed, akh	Asclapedaceae	Shrub	Terrestrial
33	<i>Cana indica</i> L.	Cana	Canaceae	Herb	Terrestrial
34	<i>Cassia fistula</i> L.	Amaltas	Caesalpiniaceae	Tree	Terrestrial
35	<i>Cassia occidentalis</i> L.	coffee senna	Caesalpiniaceae	Tree	Terrestrial
36	<i>Catharanthus roseus</i> (L.) G.Don	Sadabahar, Periwinkle	Apocyanaceae	Herb	Terrestrial
37	<i>Chenopodium album</i> L.	Bathua	Amaranthaceae	Herb	Terrestrial
38	<i>Chlorophytum comosum</i> (Thunb.) Jacques	Spider plant	Asparagaceae	Herb	Terrestrial
39	<i>Chukrasia tabularis</i> A. Juss.	Chittagong wood	Meliaceae	Tree	Terrestrial
40	<i>Citrus lemon</i> (L.) Burm. f.	Lemon	Rutaceae	Shrub	Terrestrial
41	<i>Clerodendrum energe</i> (L.) Gaertn.	Enerme	Lamiaceae	Shrub	Terrestrial
42	<i>Clitoria ternate</i> L.	Butterfly pea, Aparajita	Febaceae	Climber	Terrestrial
43	<i>Codiaeum sps.</i>	Croton	Euphorbiaceae	Shrub	Terrestrial
44	<i>Combretum indicum</i> (L.) DeFilipps	Madhumalati	Combretaceae	Climber	Terrestrial
45	<i>Cordia myxa</i> L.	Lasura	Boraginaceae	Tree	Terrestrial
46	<i>Crinum asiaticum</i> L.	Poison bulb	Amaryllidaceae	Herb	Terrestrial
47	<i>Crinum latifolium</i> L.	Sudarshana	Amaryllidaceae	Herb	Terrestrial
48	<i>Croton bonplandianum</i> Baill	Ban tulsi	Euphorbiaceae	Herb	Terrestrial
49	<i>Curcuma longa</i> L.	Haldi	Zingiberaceae	Herb	Terrestrial
50	<i>Cuscuta reflexa</i> Roxb.	Giant Dodder	Cuscutaceae	Parasite	Parasite
51	<i>Cycas revolute</i> Thumb.	Cycas	Cycadaceae	Tree	Terrestrial
52	<i>Cynodon dactylon</i> (L.) Pers.	Dhoob grass	Poaceae	Herb	Terrestrial
53	<i>Cyperus rotundus</i> L.	java grass	Cyperaceae	Herb	Terrestrial
54	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Crowfootgrass	Poaceae	Herb	Terrestrial
55	<i>Datura metel</i> L.	Dhatura	Solanaceae	Shrub	Terrestrial
56	<i>Delbergia sissoo</i> DC.	Sheesham	Fabaceae	Tree	Terrestrial
57	<i>Delonix regia</i> (Hook) Raf.	Gulmohar	Caesalpiniaceae	Tree	Terrestrial
58	<i>Dracaena reflexa</i> Lam.	Song of india	Asparagaceae	Shrub	Terrestrial
59	<i>Dracaena trifasciata</i> (Prain) Mabb.	Snake plant	Asparagaceae	Herb	Terrestrial
60	<i>Duranta erecta</i> L.	Duranta	Verbenaceae	Shrub	Terrestrial
61	<i>Dypsis lutescens</i> (H.wendl.)Beentje &J. Dransf	Areca palm	Aracaceae	Tree	Terrestrial
62	<i>Eclipta alba</i> (L.) Hassk.	false daisy, bhringoraj	Asteraceae	Herb	Terrestrial
63	<i>Embelica officinalis</i> Gaertn.	Amla	Euphorbiaceae	Tree	Terrestrial
64	<i>Epipremnum aureum</i> (Linden & André) G.S.Bunting.	Money plant	Araceae	Herb	Terrestrial
65	<i>Eragrostis viscosa</i> (Retz.) Trin.	Sticky lovegrass	Poaceae	Herb	Terrestrial

66	<i>Euphorbia hirta</i> L.	asthma-plant	Euphorbiaceae	Herb	Terrestrial
67	<i>Euphorbia mili</i> Des Moul	Crown of thorns	Euphorbiaceae	Shrub	Terrestrial
68	<i>Euphorbia serpens</i> Kunth	Creeping Spurge	Euphorbiaceae	Herb	Terrestrial
69	<i>Euphorbia tirucalli</i> L.	Pencil tree	Euphorbiaceae	Shrub	Terrestrial
70	<i>Evolvulus alsinoides</i> (L.) L.	Dwarf morning glory	Convolvulaceae	Herb	Terrestrial
71	<i>Evolvulus nummularius</i> (L.) L.	Vishnukrantha	Convolvulaceae	Herb	Terrestrial
72	<i>Ficus bengalensis</i> L.	Bargad	Moraceae	Tree	Terrestrial
73	<i>Ficus benjamina</i> L.	Jawa Fig Tree	Moraceae	Tree	Terrestrial
74	<i>Ficus elastic</i> Roxb.ex Honem	Rubber plant	Moraceae	Tree	Terrestrial
75	<i>Ficus glomerata</i> Roxb.	Gular	Moraceae	Tree	Terrestrial
76	<i>Ficus microcarpa</i> L.f.	Chinese banyan	Moraceae	Shrub	Terrestrial
77	<i>Ficus religiosa</i> L.	Peepal	Moraceae	Tree	Terrestrial
78	<i>Ficus virens</i> Aiton.	Pilkhan	Moraceae	Tree	Terrestrial
79	<i>Gnaphalium pensylvanicum</i> Willd.	Purple cudweed	Asteraceae	Herb	Terrestrial
80	<i>Grevilla robusta</i> A.Cunn. ex R.Br	silver oak	Proteaceae	Tree	Terrestrial
81	<i>Hamelia patens</i> Jacq.	Hamelia	Rubiaceae	Shrub	Terrestrial
82	<i>Hibiscus rosa sinensis</i> L.	Gurhal, hibiscus	Malvaceae	Shrub	Terrestrial
83	<i>Jacaranda mimosifolia</i> D.Don	Jacaranda	Bignoniaceae	Tree	Terrestrial
84	<i>Jatropha integerrima</i> Jacq.	Peregrina	Euphorbiaceae	Shrub	Terrestrial
85	<i>Juniperus chinensis</i> L.	Juniper	Cupressaceae	Tree	Terrestrial
86	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Bryophyllum, air plant	Crassulaceae	Herb	Terrestrial
87	<i>Kigelia Africana</i> (Lam.) Benth.	Balamkheera	Bignoniaceae	Tree	Terrestrial
88	<i>Lagerstroemia speciosa</i> (Lam.) Pers.	pride of India	Lythraceae	Tree	Terrestrial
89	<i>Lantana camara</i> L.	Lantana	Verbenaceae	Shrub	Terrestrial
90	<i>Launaea nudicaulis</i> (L.) Hook.f.	bold-leaf launaea	Asteraceae	Herb	Terrestrial
91	<i>Lawsonia innermis</i> L.	Henna	Lythraceae	Shrub	Terrestrial
92	<i>Lemna perpusilla</i> Torr.	Duckweed	Araceae	Herb	Aquatic
93	<i>Leucaena leucocephala</i> (Lam.) de Wit.	Subabul	Caesalpinaceae	Tree	Terrestrial
94	<i>Livistonia chinensis</i> (Jacq.) R.Br. ex Mart	Chinese Fan Palm	Arecaceae	Tree	Terrestrial
95	<i>Mangifera indica</i> L.	Mango	Anacardiaceae	Tree	Terrestrial
96	<i>Manilkara zapota</i> (L.)P. Royen	Chiku	Sapotaceae	Tree	Terrestrial
97	<i>Mazus pumilus</i> (Burm. f.) Steenis	Japanese Mazus	Scrophulariaceae	Herb	Terrestrial
98	<i>Melia azadarach</i> L.	Bakayan	Meliaceae	Tree	Terrestrial
99	<i>Moringa oleifera</i> Lam.	Shahjan	Fabaceae	Tree	Terrestrial
100	<i>Morus alba</i> L.	Mullberry	Moraceae	Tree	Terrestrial
101	<i>Mukia maderaspatana</i> (L.) M.Roem.	Madras pea pumpkin	Cucurbitaceae	Herb	Terrestrial
102	<i>Murraya koenigii</i> (L.) Spreng.	Curry Patta	Rutaceae	Tree	Terrestrial
103	<i>Murraya paniculata</i>	Orange jasmine	Rutaceae	Shrub	Terrestrial
104	<i>Musa paradisiaca</i> L.	Banana	Musaceae	Herb	Terrestrial
105	<i>Nerium oleander</i> L.	lal kaner	Apocyanaceae	Shrub	Terrestrial
106	<i>Nicotiana plumbaginifolia</i>	Tex-Mex tobacco	Solanaceae	Herb	Terrestrial
107	<i>Nyctanthes arbortritis</i> L.	Harsringar	Oleaceae	Tree	Terrestrial
108	<i>Ocimum sanctum</i> L.	Tulsi	Lamiaceae	Herb	Terrestrial
109	<i>Opuntia vulgaris</i> Mill.	Prickly Pear Cactus	Cactaceae	Shrub	Terrestrial
110	<i>Oxalis corniculata</i> L.	Creeping wood sorrel	Oxalidaceae	Herb	Terrestrial
111	<i>Parthenium hysterophorus</i> L.	Parthenium	Asteraceae	Herb	Terrestrial
112	<i>Pedilanthus tithymaloides</i> (L.) Poit.	Zig zag plant	Euphorbiaceae	Herb	Terrestrial
113	<i>Peristrophe paniculata</i> (Forssk.) Brumm	Panicled Foldwing	Acanthaceae	Herb	Terrestrial
114	<i>Phyllanthus niruri</i> L.	Bhumi Amla	Euphorbiaceae	Herb	Terrestrial
115	<i>Plumeria alba</i> L.	Champa	Apocyanaceae	Tree	Terrestrial
116	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Ashok	Annonaceae	Tree	Terrestrial
117	<i>Pongamia pinnata</i> (L.) Pierre	Pongam, Papadi	Fabaceae	Tree	Terrestrial
118	<i>Portulaca grandiflora</i> Hook.	Sun-rose	Portulacaceae	Herb	Terrestrial
119	<i>Portulaca oleracea</i> L.	Common purslane	Portulacaceae	Herb	Terrestrial
120	<i>Portulacaria afra</i> (L.) Jacq.	Jade plant	Portulacaceae	Shrub	Terrestrial
121	<i>Prosopis cineraria</i> (L.) Druce	Shami	Fabaceae	Shrub	Terrestrial
122	<i>Pseuderanthemum maculatum</i> (G.Lodd.) I.M.Turne	yellow-vein eranthemum	Acanthaceae	Shrub	Terrestrial
123	<i>Psidium guajava</i> L.	Guava	Myrtaceae	Tree	Terrestrial
124	<i>Pterospermum acerifolium</i> (L.) Willd.	Kanak chumpa	Malvaceae	Tree	Terrestrial
125	<i>Punica granatum</i> L.	Pomgranate	Punicaceae	Shrub	Terrestrial
126	<i>Rauwolfia serpentina</i> (L.)Benth. Ex. Kurz	Sarpagadh	Apocyanaceae	Shrub	Terrestrial
127	<i>Rhapis excelsa</i> (Thunb.) A.Henry ex Rehder.	Rhapis palm	Arecaceae	Shrub	Terrestrial
128	<i>Ricinus communis</i> L.	Castor oil plant	Euphorbiaceae	Shrub	Terrestrial
129	<i>Rosa indica</i> L.	Rose	Rosaceae	Shrub	Terrestrial
130	<i>Santalum album</i> L.	Chandan	Santalaceae	Tree	Terrestrial
131	<i>Scirpus littoralis</i> Schrad.	club-rush	Cyperaceae	Herb	Terrestrial
132	<i>Selenicereus undatus</i> (Haw.) D.R. Hunt.	Dragon fruit	Cactaceae	Climber	Terrestrial
133	<i>Senna siamea</i> (Lam.) H.S.Irwin & Barneby	Kassod	Caesalpinaceae	Tree	Terrestrial

134	<i>Sida acuta</i> Burm.f.	common wireweed	Malvaceae	Herb	Terrestrial
135	<i>Solanum nigrum</i> L.	Makoi	Solanaceae	Herb	Terrestrial
136	<i>Sonchus arvensis</i> L.	field sowthistle	Asteraceae	Herb	Terrestrial
137	<i>Syngonium podophyllum</i> Schott.	Arrow head Plant	Araceae	Herb	Terrestrial
138	<i>Syzium cumini</i> (L.) Skeels	Jamun	Myrtaceae	Tree	Terrestrial
139	<i>Tabernaemontana divericata</i> (L.) R.Br. ex Roem. & Schult.	Crape jasmine	Apocyanaceae	Shrub	Terrestrial
140	<i>Tagetes erecta</i> L.	Marigold	Asteraceae	Herb	Terrestrial
141	<i>Tamarindus indica</i> L.	Imli	Fabaceae	Tree	Terrestrial
142	<i>Tecoma stans</i> (L.) Juss.ex. Kunth	Yellow bell	Bignoniaceae	Shrub	Terrestrial
143	<i>Tectona grandis</i> L. f.	Saagaun	Verbenaceae	Tree	Terrestrial
144	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Arjun	Combretaceae	Tree	Terrestrial
145	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Baheda	Combretaceae	Tree	Terrestrial
146	<i>Thevetia peruviana</i> (Pers.) K. Schum.	pili kaner	Apocyanaceae	Shrub	Terrestrial
147	<i>Thuja occidentalis</i> L.	White cedar, Morpankhi	Cupressaceae	Shrub	Terrestrial
148	<i>Tinospora cordifolia</i> (Willd.) Miers.	Giloy	Menispermaceae	Climber	Terrestrial
149	<i>Tridax procumbens</i> L.	Coat buttons	Asteraceae	Herb	Terrestrial
150	<i>Vernonia cinerea</i> (L.) Less.	Ash Fleabane	Asteraceae	Herb	Terrestrial
151	<i>Zamia furfuracea</i> L.f.	cardboard cycad	Zamiaceae	Shrub	Terrestrial
152	<i>Ziziphus jujube</i> Mill.	Ber	Rhamnaceae	Shrub	Terrestrial

Table 2: Diversity of Species by Habit

S. No.	Habit	No. of Species	Percentage
1	Herbs	60	39%
2	Trees	52	34%
3	Shrubs	35	23%
4	Climber	04	0.26%
5	Parasite	01	0.06%

Table 3: Top Families by Species Count

S. No.	Family	No. of Species
1	Euphorbiaceae	12
2	Asteraceae	9
3	Moraceae	9
4	Apocyanaceae	7
5	Caesalpiniaceae	7
6	Fabaceae	7
7	Amaranthaceae	6
8	Malvaceae	5
9	Liliaceae	4
10	Poaceae	4
11	Rutaceae	4

Conclusion

The documentation of flora in the Government. P.G. College Noida reveals a rich tapestry of biodiversity, encompassing 152 species across 59 families. Herbs and Trees dominate the vegetation, providing ecological stability and cultural significance. Herbs and shrubs enrich the landscape with medicinal and ornamental value, while climbers and aquatic species add niche diversity. The presence of invasive species highlights ecological challenges, necessitating proactive management.

The study underscores the multifaceted importance of campus flora—ecological, medicinal, ornamental, economic, and cultural. It emphasizes the role of institutional campuses as biodiversity refuges in urban landscapes, mitigating the adverse effects of urbanization. Conservation strategies, including controlled planting, invasive species management, and awareness programs, are essential for sustaining biodiversity.

Educationally, the study fosters environmental consciousness among students, integrating biodiversity into academic curricula. Culturally, it reinforces heritage by documenting species with symbolic significance. Economically, it highlights the utility of plants in food,

timber, and medicine. Ecologically, it contributes to regional biodiversity databases, informing conservation policies and sustainable development.

In conclusion, the flora of Govt. P.G. College Noida is not merely a collection of plant species; it is a living laboratory, a cultural repository, and an ecological refuge. Its documentation enriches scientific knowledge, promotes conservation, and fosters a holistic understanding of biodiversity. As urbanization continues to reshape landscapes, such studies are vital for preserving ecological integrity and ensuring a sustainable future.

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