

Biodiversity Audit Report For St. Xavier's College, Simdega, Jharkhand



Submitted To



St. Xavier's College, Simdega

Environmental Laboratories & Engineering Services Pvt. Ltd.

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(December 2023)



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ACKNOWLEDGEMENT

The task of performing a biodiversity audit of the campus has been given to Environmental Laboratories & Engineering Services Pvt. Ltd. (ELESPL), Ranchi by St. Xavier's College, Simdega as part of their green effort.

ELESPL hereby express sincere thanks to the following officials of St. Xavier's College, Simdega for their proactive support and courtesy extended to the energy audit team during field study.

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1. Introduction

St. Xavier's College, Simdega was established by the *Ranchi Jesuit Society (Jesuits)* as a Catholic Minority Educational Institution of Higher Education. The college aims to provide quality education to tribal students and marginalized communities, fostering their intellectual, social, and spiritual growth. It is a part of the *Xaviers Ranchi* society, registered under the *Society's Registration Act XXI of 1860* (No. 198/2005-2006 Jharkhand, No. 13/1958-59 Bihar). The institution is currently located on the premises of *St. John Berchmans Apostolic School, Samtoli*.

Named in honor of *St. Francis Xavier*, the patron saint and a founding member of the *Society of Jesus*, the college commenced academic operations on *August 1, 2016*, with an initial enrollment of *454 students* in *Arts and Commerce* undergraduate programs. It is affiliated with *Ranchi University, Jharkhand*, and awards degrees to students who successfully pass the university examinations.

As a leading institution of higher education in Jharkhand, *St. Xavier's College, Simdega* is committed to academic excellence and holistic development. Managed by the *Jesuit Society*, the college upholds the values of intellectual and moral growth. It offers undergraduate and postgraduate programs in *Arts and Commerce*, fostering a dynamic learning and research environment.

Equipped with modern infrastructure, a highly qualified faculty, and a vibrant campus life, the college promotes both academic and extracurricular excellence. Rooted in the *Jesuit tradition of education*, the institution nurtures responsible citizens who contribute meaningfully to society. Through discipline, ethical values, and social service, *St. Xavier's College, Simdega* continues to be a center for knowledge and leadership development in the region.

2. Biodiversity on Campus

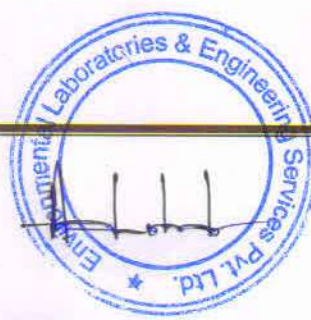
The *St. Xavier's College, Simdega* campus is home to diverse flora and fauna, enhancing its ecological richness. A biodiversity survey conducted across various locations within the campus documented numerous plant and animal species.

Flora

The campus hosts a variety of trees, shrubs, herbs, grasses, medicinal plants, and climbers, contributing to its green and sustainable environment.

Notable Trees:

- *Tectona grandis* (Sagwan, Teak)
- *Shorea robusta* (Sal, Sakhua)
- *Ficus religiosa* (Banyan Tree)



Fruit-Bearing Plants:

- *Mangifera indica* (Mango, Aam)
- *Punica granatum* (Pomegranate, Anar)
- *Psidium guajava* (Guava, Amrud)
- *Syzygium cumini* (Jamun)
- *Ziziphus mauritiana* (Ber)

Medicinal Plants:

- *Tinospora cordifolia* (Giloy)
- *Ocimum tenuiflorum* (Holy Basil, Tulsi)

Flowering Plants:

- *Dahlia pinnata* (Dahlia)
- *Tagetes erecta* (Marigold)
- *Trachelospermum jasminoides* (Star Jasmine)
- *Rosa chinensis* (Rose)

Fauna

The campus also supports a variety of fauna, including birds, reptiles, insects, and other small creatures.

Commonly Observed Fauna:

- Various local bird species
- Snakes (seasonal and local species, as per gardener reports)
- Lizards (*Garden Lizard*, *Wall Lizard*)
- Insects (*Dragonflies*, *Butterflies*, *Spiders*, *Ants*, *Crickets*, *Grasshoppers*)
- Termites (observed on trees)

During the biodiversity survey, specific fauna sightings included:

- *Yellowish & Blackish Butterflies*
- *Greenish Dragonflies*
- *Various Species of Spiders*
- *Reddish-Brown Ants*

A detailed biodiversity survey report has documented the scientific names and family classifications of all recorded flora and fauna, contributing to ecological studies and conservation initiatives at the institution.



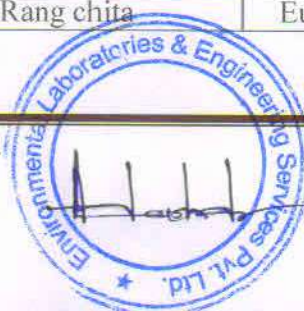
3. FLORA

3.1 Trees

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Tectona grandis</i>	Sagwan	Lamiaceae
2.	<i>Punica granatum</i>	Anar, Pomegranate	Lythraceae
3.	<i>Mangifera indica</i>	Aam, Mango	Anacardiaceae
4.	<i>Swietenia mahagoni</i>	Mahogany	Meliaceae
5.	<i>Shorea robusta</i>	Sal, Sakhua	Dipterocarpaceae
6.	<i>Psidium guajava</i>	Guava, Amrud	Myrtaceae
7.	<i>Gmelina arborea</i>	Gambhar	Lamiaceae
8.	<i>Artocarpus heterophyllus</i>	Kathal, Jackfruit	Moraceae
9.	<i>Dalbergia sissoo</i>	Shisham	Fabaceae
10.	<i>Pongamia pinnata</i>	Karanj	Fabaceae
11.	<i>Azadirachta indica</i>	Neem	Meliaceae
12.	<i>Adina cordifolia</i>	Karam	Rubiaceae
13.	<i>Anacardium occidentale</i>	Kaju, Cashew	Anacardiaceae
14.	<i>Saraca asoca</i>	Ashoka	Fabaceae
15.	<i>Bauhinia variegata</i>	Koinar	Fabaceae
16.	<i>Areca catechu</i>	Supadi	Arecaceae
17.	<i>Syzygium cumini</i>	Jamun	Myrtaceae
18.	<i>Carica papaya</i>	Papaya	Caricaceae
19.	<i>Schleichera oleosa</i>	Kusum, Lac Tree	Sapindaceae
20.	<i>Citrus limon</i>	Lemon	Rutaceae
22.	<i>Tamarindus indica</i>	Imli	Fabaceae
23.	<i>Terminalia catappa</i>	Indian Almond	Combreraceae
24.	<i>Ziziphus mauritiana</i>	Ber	Rhamnaceae
25.	<i>Alstonia scholaris</i>	Blackboard tree	Apocynaceae
26.	<i>Quercus polymorpha</i>	Mexican white oak	Fagaceae
27.	<i>Albizia julibrissin</i>	Pink silk tree	Fabaceae
28.	<i>Ficus religiosa</i>	Banyan Tree	Moraceae
29.	<i>Ficus microcarpa</i>	Chinese Banyan	Moraceae
30.	<i>Areca triandra</i>	Palm	Arecaceae

3.2 Herbs and Shrubs

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Erythrochiton brasiliensis</i>	Star of Brazil	Rutaceae
2.	<i>Ixora coccinea</i>	Jungle geranium	Rubiaceae
3.	<i>Dahlia pinnata</i>	Dahlia	Asteraceae
4.	<i>Tagetes erecta</i>	Marigold	Asteraceae
5.	<i>Trachelospermum jasminoides</i>	Star jasmine	Apocynaceae
6.	<i>Turnera diffusa</i>	Damiana	Passifloraceae
7.	<i>Euphorbia tithymaloides</i>	Rang chita	Euphorbiaceae



SL . No	Scientific name	Indian Common Name	Family
8.	<i>Euphorbia milli</i>	Crown of thorns	Euphorbiaceae
9.	<i>Aucuba japonica</i>	Japanese laurel	Garryaceae
10.	<i>Cordyline fruticosa</i>	Ti plant	Asparagaceae
11.	<i>Aloe barbadensis miller</i>	Aloe vera	Asphodelaceae
12.	<i>Prosopis juliflora</i>	Mesquite	Fabaceae
13.	<i>Plumeria rubra</i>	Frangipani	Apocynaceae
14.	<i>Chrysanthemum indicum</i>	Indian chrysanthemum	Asteraceae
15.	<i>Thuja compacta</i>	Thuja	Cupressaceae
16.	<i>Hibiscus rosa-sinensis</i>	China rose	Malvaceae
17.	<i>Dracaena reflexa</i>	Song of India	Asparagaceae
18.	<i>Rosa chinensis</i>	Rose	Rosaceae
19.	<i>Canna indica</i>	Indian shot	Cannaceae
20.	<i>Abutilon wrightii</i>	Indian mallow	Malvaceae
21.	<i>Cymbidium aloifolium</i>	Aloe Leaf Cymbidium	Orchidaceae
22.	<i>Syngonium podophyllum</i>	Arrowhead plant	Araceae
23.	<i>Mecardonia procumbens</i>	Brahmi	Plantaginaceae
24.	<i>Madagascar periwinkle</i>	Bright eyes, sadabahar	Apocynaceae
25.	<i>Euphorbia pulcherrima</i>	Poinsettias	Euphorbiaceae
26.	<i>Platycladus orientalis</i>	Morpankhi	Cupressaceae
27.	<i>Araucaria heterophylla</i>	Christmas Plant	Araucariaceae
28.	<i>Pedilanthus titymaloides</i>	Zigzag Plant	Euphorbiaceae
29.	<i>Plumeria Pudica</i>	Bridal Bouquet	Apocyanaceae

3.3 Grasses

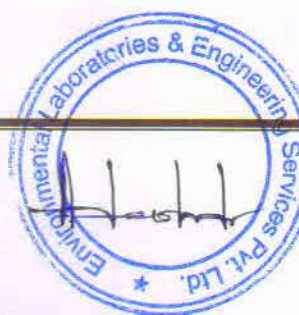
SL . No	Scientific name	Indian Common Name	Family
1.	<i>Melinis repens</i>	Natal grass	Poaceae
2.	<i>Alternanthera sessilis</i>	Sessile joyweed	Amaranthaceae
3.	<i>Cynodon dactylon</i>	Indian doab	Poaceae
4.	<i>Acalypha rhomboidea</i>	Copper leaf	Euphorbiaceae
5.	<i>Oxalis corniculata</i>	Creeping woodsorrel	Oxalidaceae

3.4 Medicinal Plant

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Tinospora cordifolia</i>	Giloy	Menispermaceae
2.	<i>Ocimum tenuiflorum</i>	Holy Basil, Tulsi	Lamiaceae

3.5 Climbers

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Clitoria ternatea</i>	Aparajita	Fabaceae



4. FAUNA

4.1 Snakes

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Amphiesma stolatum</i>	Buff striped keelback	Amphiesma
2.	<i>Ptyas mucosa</i>	Oriental rat snake	Colubridae
3.	<i>Dendrelaphis punctulatus</i>	Green Tree Snake	Colubridae
4.	<i>Bungarus caeruleus</i>	Indian krait	Elapidae

4.2 Birds

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Milvus migrans</i>	Kite	Accipitridae
2.	<i>Columba livia</i>	Rock Pigeon	Columbidae
3.	<i>Corvus splendens</i>	House Crow	Corvidae
4.	<i>Acridotheres tristis</i>	Common Myna	Sturnidae
5.	<i>Passer domesticus</i>	House Sparrow	Passeridae

4.3 Lizards

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Calotes versicolor</i>	Oriental Garden Lizard	Agamidae
2.	<i>Podarcis muralis</i>	Common Wall Lizard	Lacertidae

4.4 Dragonflies

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Orthetrum sabina</i>	Green marsh hawk	Libellulidae
2.	<i>Caconeura ramburi</i>	Indian blue bombootail	Platycnemididae
3.	<i>Pseudagrion rubriceps</i>	Saffron-faced blue dart	Coenagrionidae
4.	<i>Geotrupes stercorarius</i>	Dor beetle	Geotrupidae

4.5 Butterflies

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Euploea core</i>	Common Crow Butterfly	Nymphalidae
2.	<i>Rapala varuna</i>	Indigo Flash	Lycaenidae
3.	<i>Eurema brigitta</i>	Small Grass Yellow Butterfly	Pieridae

4.6 Spider

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Argiope aemula</i>	Oval St Andrew's cross spider	Araneidae
2.	<i>Argiope trifasciata</i>	Banded garden spider	Araneidae





Areca triandra (Palm Tree)



Platycladus orientalis (Morpankhi)



Hibiscus rosa-sinensis (China rose)



Dracaena reflexa
(Song of India Tree)



Punica granatum (Anar)



Araucaria heterophylla
(Christmas Plant)



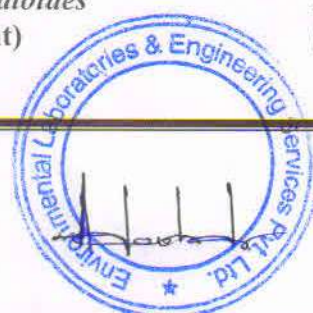
Shorea robusta
(Sal, Sakhua)



Pedilanthus titymaloides
(Zigzag Plant)



Plumeria pudica
(Bridal Bouquet)



5. Conclusion

The biodiversity survey of *St. Xavier's College, Simdega* highlights the rich and diverse ecosystem within the campus. The study recorded 30 species of trees, 29 types of shrubs and herbs, 5 species of garden grasses, and 2 valuable medicinal plants, underscoring the ecological significance of the area. Additionally, the presence of various fauna—including 4 species of snakes, 5 species of birds, 2 types of lizards, 4 species of dragonflies, 3 species of butterflies, and 2 species of spiders—indicates a thriving natural habitat.

This survey emphasizes the need for conservation and sustainable management of campus biodiversity. The presence of native and medicinal plant species plays a crucial role in maintaining environmental balance, while the diversity of avian and insect species suggests a healthy ecosystem.

To preserve and enhance biodiversity, the college should implement conservation strategies such as plantation drives, habitat protection initiatives, and awareness programs for students and staff. Future studies can build upon this research by monitoring seasonal variations in species diversity and assessing the impact of human activities on the ecosystem.

Overall, this study serves as a foundation for future ecological assessments and reinforces the role of educational institutions in preserving local biodiversity.

