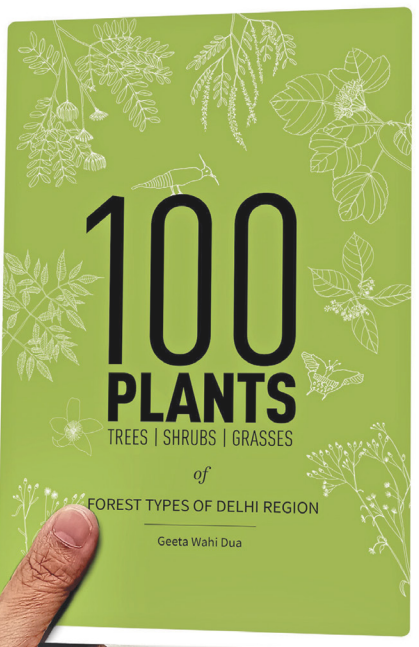


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PLANTS IN ECOLOGY AND DESIGN



‘100 Plants’ offers insight into Delhi’s ecology, guiding landscape architects and gardeners to cultivate sustainable, bio-diverse urban landscapes. It is an essential resource for all plant enthusiasts.

We were delighted when we first heard about Geeta Wahi Dua’s ‘100 Plants: Trees | Shrubs | Grasses of Forest Types of Delhi Region’, especially because it is a book coming directly from the sphere of landscape architecture — and from a landscape architect — that draws urgent attention to ecology and highlights the importance of planting the right species in the right place.

Landscape architecture wields an immense power in shaping the ground beneath our feet and the cities we inhabit. Landscapers make big decisions that sculpt and shape our cityscapes. They make choices about which plants cohabit the city with us and in effect how our urban habitats are shaped for many years to come. With India’s cities growing rapidly, there is now more pressure than ever on our landscapes, our natural ecosystems, and the wildlife they support. Can our expanding cities continue to support wildlife that lives in and around them? Can we design our gardens and landscapes in a way that they aren’t thirsty and need constant care and maintenance? In other words, can we create truly self-sustaining cities? This book about Delhi’s native plants provides some of the answers and opens a window for landscapers to ‘read’ a landscape for what it is, and make planting decisions that incorporate plants that are adapted to growing in Delhi’s different soils and micro-habitats.





100 PLANTS TREES | SHRUBS | GRASSES OF FOREST TYPES OF DELHI REGION

Study: Geeta Wahi Dua

Watercolors: Shivani Gupta

Published by LA, Journal of Landscape
Architecture [2023]

Size: 228 mm x 152 mm x 15 mm

180 Pages, Softcover

ISBN: 978-81-926254-8-5

100 PLANTS extends the knowledge of different plant species belonging to the Northern Tropical Dry Deciduous Forests and Northern Tropical Thorn Forests of India covering arid and semi-arid regions of Delhi for their imagination as potential design elements in diverse contexts in landscape architecture. It is hoped that the book will help to inform and enrich the art of designing, restoring, and stabilizing sites with these climatically adapted species for curating new experiential, functional, and sustainable sites in many interesting ways.



The book begins by inviting you to ‘look’ at Delhi from a lens that has been hidden in plain sight all this while. Throughout the book, you see Delhi not through its political boundaries (current or past), nor its political boundaries or cultural histories, but through the ground that the city stands on: Delhi’s 4 distinct landform types, the kind of soils that they hold, and the forest types that they support. This forms the foundation on which the book builds and goes on to describe the plants that each landform type supports.

As a landscape architect, the author with an understanding of Delhi’s ecology tries to bridge an important gap between the domains of landscape architecture and urban ecology. This book, at once, invites practicing architects and gardeners to pay close attention to Delhi’s ecology, and ecologists to look at plants from their aesthetic and functional appeal in a landscape.

Whether you are a gardener or a practicing landscape designer, the book contains a treasure trove of information about Delhi’s native plants and how you can use them in your gardens, not just for supporting biodiversity but also for their aesthetic appeal through different seasons. It also contains some bonus ‘cultural information’



Indigofera tinctoria

Hilba | Family: Fabaceae
Deciduous

Sparsely foliage of small dark green leaflets, arranged opposite with woody branches with mouse flowers, curial near pod

phenology

growth characteristics
Height: Short
Form: Multibranched

growth requirements
Soil Texture: Sandy, Loamy, Clayey
Soil pH: Neutral
Moisture Holding Capacity: Low
Shade Tolerance: Intolerant

environmental improvement and adaptation
As drought tolerant species
For nitrogen fixation
Has ability to grow in shallow/ gravelly/ alkaline and saline soils
As woodland species
For nutrient recycling

ecological services
Nesting habitat for birds
Habitat for insects

ethnobotanical uses
The plant is used for making natural dye in textile industry

possible design functions
Ornamentation & Variety with vibrant red floral attributes in the form of blue foliage with small mouse flowers | Natural and to animal feeding | To be grown in sheltered position in dry windy areas

Jasminum sambac

Mogra | Family: Oleaceae
Evergreen

Spreading foliage of round, rough, dark green leaves with small very fragrant white flowers in clusters, inconspicuous green fruit

phenology

growth characteristics
Height: Medium
Form: Multibranched

growth requirements
Soil Texture: Loamy, Clayey
Soil pH: Neutral
Moisture Holding Capacity: Low
Shade Tolerance: Partial Shade

ecological services
Nesting habitat for birds
Habitat for insects
Nectar plant for birds/butterflies/ bees

ethnobotanical uses
Have a significant role in mythology, religion and vernacular traditions

possible design functions
Supplementing screening | Ornamentation & Variety with seasonal floral attributes in the form of white fragrant flowers that bloom throughout the year | As part of Indian cultural landscapes

Cenchrus ciliaris

arjan | Family: Poaceae
Perennial

Erect, with hard shoots
Dark thin leaves with cylindrical, curved thick inflorescence, violet green in colour
Densely packed spikelets with thin white hairs

growth characteristics
Height: Medium
Habit: Clumping

growth requirements
Soil Texture: Sandy, Loamy
Soil pH: Alkaline
Moisture Holding Capacity: Low
Shade Tolerance: Shade Intolerant

environmental improvement and adaptation
As Drought tolerant species
Has ability to grow in shallow/ gravelly and saline soils
Prevent erosion
Can grow in contaminated soils

ecological services
Habitat for insects
Larval host plant for butterflies/ insects

Note
As it is a grass with associated plant species for water and nutrient use, one needs a degree of management and maintenance in urban situations.

Cenchrus purpureus

elephant grass | Family: Poaceae
Annual

Bushy foliage
Long narrow dull green leaves
Inflorescence in the form of thick long brown spikes with spikelets

growth characteristics
Height: Tall
Habit: Clumping

growth requirements
Soil Texture: Sandy, Loamy
Soil pH: Alkaline
Moisture Holding Capacity: Low
Shade Tolerance: Partial Shade

ecological services
Habitat for insects
Larval host plant for butterflies/ insects

Note
With its rapid maturity it becomes stemmy in a short period of time.

environmental improvement and adaptation
As Drought tolerant species
Has ability to grow in shallow/ gravelly and saline soils
Prevent erosion
Can grow in contaminated soils

about each plant. It lays out all the information you need about the region's native plants, from their growth characteristics and when they bloom, to the types of soil and moisture regimes they prefer. It even lists the character of foliage of trees and the 'form' of shrubs, and includes recommendations of where to plant them in a landscape. All this information is laid out across a concise spread that you can look at in a single glance. Best of all, it includes species from the usually-overlooked and much-neglected grass family. Informed, crisp, and concise, this book is an indispensable guide for Delhi's planners garden designers, and horticulturists, and a must-have for all of the capital city's plant lovers.

We hope that this book is a stepping stone for many more such guides to come, those that can communicate the beauty of native plants with vivid photographs and illustrations, replete with examples of sustainable gardens in Delhi that have already made the 'switch' to using indigenous species. Delhi will soon, perhaps, grapple with climate change and water-stress, and if there's any hope in resilience, it's offered by indigenous species that have evolved to thrive in extreme climes. The landscape architecture and gardening professions are at the forefront of bringing our indigenous plants back into peoples' focus.

