

Native plants are less demanding maintenance-wise

Native plants have evolved with animals, fungi and microbes to form a complex network of mutual relationships, thus striking a perfect balance in the eco-system they sustain, writes **N. CHANDRAMOHAN REDDY**

Who is watering the millions of plants in the forests, supplementing the fertilizers and taking care of the pests? When the forest plants do not make many demands, why do the garden plants? Can't we mimic the forest situation in our gardens? Having those forest plants in our garden is the answer to all these questions. As the native plants have adapted themselves to the climate, geology and hydrology, and evolved according to the local conditions over thousands of years, they are not exacting. Also these indigenous plants have co-evolved with animals, fungi and microbes, to form a complex network of mutual relationships and make perfect balance in the eco-system they sustain.

GREEN MATTERS

and soil amendment may be needed to have good growing media for the plants.

Plant selection

By observing native plants in their natural habitat, one can learn about the cultural requirements and growth habits of various species. We can choose plants basing on the soil, light and water requirement, location in which the plant to be placed and size, shape, texture and type of foliage and blooms. Also the selection shall be based on what type of garden we intend to develop - wild-flower garden, butterfly garden, bird garden, screen garden, tree grove, fruit garden or pond garden.

Designing native landscape

Before deciding the design of the landscape, one has to assess the factors of locality like - light availability, drainage pattern, soil depth and its characters, site terrain, irrigation facility, species growing naturally in the surroundings; and accordingly finalise the type of the landscape which can match the site. Since many of the urban open spaces are barren and sterile with no good soil (in most of the situations the ground is filled with construction debris mixed with plastics), cleaning the area

Whatever we plant it is the commercial availability of native plant species in local nurseries that will determine which plants we may use in the landscape. As of now, sourcing many of the native plants is very difficult in commercial or forest nurseries, because there is no demand for them in ornamental landscaping. But things may improve with the increased awareness on the 'naturescape' development projects in future.

Characteristics may get altered

The native plants, which have adapted to the climate,



MYRIAD OPTIONS: Gardens with native plants provide more variety. -PHOTO: N. CHANDRAMOHAN REDDY

soil, and interactions with other plants and animals may face certain adverse growing conditions in the city environment, change in the chemical characteristics of soil, decrease in soil organic matter, increase in shade due to the high-rise structures, interference from pollution, invasive weeds and physical damage, increased supply of nutrients especially when irrigation is sourced from the urban lakes to mention a few. Due to this changed environment, the characteristics of the species may get altered in terms of the foliage, flowers, time of flowering and form of the plant.

Since native plants require less care, there will be savings of time, energy, money, water and other resources in maintaining the landscape. These gardens provide more variety in plant species and offer myriad alternatives to the same old exotic species. Also the landscape looks different with more diversity, not only in terms of plant species but also the visiting birds and butterflies, which add colour and vibrancy to the garden. (The author is a forest officer, presently Additional Commissioner (Parks) in GHMC and can be contacted at 'nchandramohanreddy@gmail.com')

Some native plants which can be popularised in the gardens (in addition to the plants already in use)

SPECIES	SIGNIFICANCE		
Trees			
<i>Barringtonia</i> species (<i>B. acutangula</i> , <i>B. asiatica</i>)	Evergreen, flowers, foliage	<i>Mitragyna parvifolia</i>	Foliage
<i>Bischofia javanica</i>	Foliage	<i>Neolitsea zeylanica</i>	Evergreen, foliage
<i>Bombax ceiba</i>	Flowers	<i>Olea dioica</i>	Evergreen, foliage, fragrant flowers
<i>Boswellia serrata</i>	Foliage, bark	<i>Oroxylum indicum</i>	Foliage
<i>Bridelia retusa</i>	Foliage	<i>Persea macrantha</i>	Evergreen, foliage
<i>Butea monosperma</i>	Flowers	<i>Pterocarpus santalinus</i> (Red sanders)	Foliage, pods
<i>Callicarpa macrophylla</i>	Evergreen, flowers	<i>Pterospermum</i> species	Evergreen, foliage, fragrant flowers
<i>Carallia brachiata</i>	Evergreen, foliage	(<i>P. canescens</i> , <i>P. xylocarpum</i>)	Foliage
<i>Careya arborea</i>	Foliage, flowers	<i>Pterygota alata</i>	Foliage
<i>Cassine glauca</i>	Foliage	<i>Santalum album</i> (Sandal wood)	Evergreen, fragrant wood
<i>Chukrasia tabularis</i>	Foliage	<i>Schleichera oleosa</i>	Foliage
<i>Cochlospermum religiosum</i>	Flowers, fruits	<i>Schrebera swietenoides</i>	Foliage, fragrant flowers
<i>Commiphora caudata</i>	Foliage, bark	<i>Sloanea sterculiacea</i>	Foliage, fruits
<i>Dalbergia latifolia</i> (Rosewood)	Evergreen, foliage	<i>Spondias pinnata</i>	Evergreen, foliage
<i>Dillenia</i> species (<i>D. indica</i> , <i>D. pentagyna</i>)	Foliage, fruits	<i>Terminalia</i> species (<i>T. arjuna</i> , <i>T. tomentosa</i>)	Evergreen, foliage, bark
<i>Diospyros sylvatica</i>	Evergreen, foliage	<i>Vitex altissima</i>	Foliage
<i>Elaeocarpus tectorius</i> (Rudraksha)	Evergreen, foliage, flowers	<i>Walsura trifoliata</i>	Evergreen, foliage
<i>Erythrina</i> species	Flowers	<i>Xantolis tomentosa</i>	Evergreen, fragrant flowers
<i>Ficus</i> species (<i>F. amplissima</i> , <i>F. arnottiana</i> , <i>F. auriculata</i> , <i>F. microcarpa</i> , <i>F. virens</i>)	Foliage	<i>Ximenea americana</i>	Evergreen, foliage, fruits
<i>Firmiana colorata</i>	Flowers, fruits	Shrubs	
<i>Garcinia</i> species (<i>G. spicata</i> , <i>G. xanthochymus</i>)	Evergreen, foliage	<i>Barleria prionitis</i>	Flowers
<i>Galberia</i> species (<i>G. gummiifera</i> , <i>G. latifolia</i> , <i>G. resinifera</i>)	Foliage, fragrant flowers	<i>Capparis</i> species	Flowers
<i>Glochidion heyneanum</i>	Foliage	<i>Crinum</i> species	Flowers
<i>Gyrocarpus americanus</i>	Bark, fruits	<i>Ochna</i> species	Foliage
<i>Hildegardia populifolia</i>	Foliage, flowers	<i>Psychotria monticola</i>	Foliage, flowers
<i>Ixora pavetta</i>	Evergreen, fragrant flowers	<i>Tamarix troupii</i>	Foliage
<i>Kavalama urens</i> (<i>Sterculia urens</i>)	Foliage, bark	Climbers	
<i>Lagerstroemia parviflora</i>	Foliage	<i>Aganosma heynei</i>	Foliage, flowers
<i>Mallotus philippensis</i>	Evergreen, foliage	<i>Aristolochia</i> species	Flowers
<i>Mammea suriga</i>	Evergreen, foliage, fragrant flowers	<i>Chonemorpha fragrans</i>	Foliage, flowers
<i>Memecylon edule</i>	Evergreen, foliage, flowers	<i>Clematis</i> species	Flowers
		<i>Hemidesmus indicus</i>	Foliage
		<i>Hiptage benghalensis</i>	Flowers
		<i>Jasminum</i> species (<i>J. auriculatum</i> , <i>J. sambac</i>)	Fragrant flowers
		<i>Thunbergia</i> species (<i>T. fragrans</i> , <i>T. mysorensis</i>)	Foliage, flowers

Use latest technologies for testing building's strength

While some people think that the quality of the materials used in the construction can be a reliable indicator for estimating the building's overall strength, others think that the reputation and track record of a builder can be a better guide. A look by **NEMMANI SREEDHAR**

You have earmarked that dream house you always wanted to own. You even finalised the finances and secured credit lines to take possession of that building. But how can you be sure about the quality of the building that you are going to occupy?

While some people think that the quality of the materials used in the construction can be a reliable indicator for estimating the building's overall strength, others think that the reputation and track record of a builder can be a better guide.

But when it comes to modern constructions, the quality of the final product could be less than the quality all its ingredients, construction material expert L.H. Rao says. Because of this, it is always advantageous to go for testing a building's strength using latest technologies, he explains.

The easiest type of testing that can be used to ascertain the strength of a concrete roof is to load it with weights and check the degree of variation that it undergoes under that load.

Though this type of testing will give a direct measure of a structure's ability to sustain weight, the building might sustain physical damage as a result of the excessive stress. Because of this, not many opt for this type of verification, Dr. Rao explains.

But with the recent advancements in the field of construction technologies, we do have a wider range of testing methods to opt from, he says. Because these methods can measure different parameters of a structure, that too with minimum physical damage, they are called 'Non-destructive Testing' (NDT) methods.

The most common and easiest method of NDT is visual inspection. A trained eye can easily find out any apparent visual aberrations in a structure. Be it a crack, a stress mark, a damp spot or an unusual touch up on a surface, when carefully observed, these apparently minute indicators can sing a song to an expert, revealing the health of a building.

The best part of the visual inspection method is that even a novice can, at least, surmise that there is some



VITAL CHECKS: The most common and easiest method of 'Non-destructive Testing' (NDT) is visual inspection.

aberration in the structure. Unless a building sustains a serious damage due to a natural calamity or due to some unusual incidents, its deterioration often starts from seemingly innocuous damages and assumes monstrous proportions if these tell-tale signs are ignored.

A periodic visual inspection can reveal these defects and can help us in nipping these problems in the bud. But this type of inspection has its own draw backs. As there is no specific data available to back the damage as-

essment, a prospective builder can write off your observations.

Also finding an expert who can accurately estimate a building's health can often be a herculean task.

But for those who want an accurate test that can churn out specific data regarding various aspects of a building, there are more technically 'sound' methods. One such method with which we can measure the strength of a wall or a concrete block is 'Schmidt Rebound Hammer Test'. With this test we can

measure the 'hardness' of a surface and it can also reveal the type of material used and the strength of the bonding between those material.

"The Schmidt Rebound Hammer Test is usually effective to measure the strength of a wall. Often we find that because of the usage of higher grade cement for plastering, a wall's outer plastering is stronger than the wall itself. By scraping a small portion of plaster and using this hammer at that spot we can measure the actual strength of the wall," Dr. Rao explains.

Stay connected with nature

Wooden flooring is catching on, but make sure it is laid properly, says architect **SATHYA PRAKASH VARANASHI**



ENTICING: The popularity of wooden flooring is on the rise.

All human beings, innately and instinctively, desire to live connected to nature.

This statement may sound strange today where artificiality is ruling our products and controlled environment is conditioning most of our urban shelters. However luxurious a penthouse apartment may be, the residents there wish to see a few green plants, even if they are planted in pots. Balconies are found more in large air conditioned houses than in small naturally ventilated homes.

After day-long work in an office with glittering steel and chrome, back at home or restaurant, we wish to see wooden furniture and open wardrobes with wooden veneers.

The growing popularity of wooden flooring could be linked to the above phenomena, attempting to bring the outside world to inside the building, if not

GREEN SENSE

totally, at least in parts. While the traditional thick wooden planks were appreciated, but came with logistical problems, there came factory processes to improve the system.

The planks available today are with equal size, even thickness and have tongue and groove joints to get a tight fit. Over time, these floor boards get a beautiful sheen and appear visually richer. All of them are made from treated mature timber, besides having surface treatment to resist water, humidity, fire and stains. Increased number of options are being added to the existing list of popular wood floors like teak, maple, cherry, walnut, mahogany and such others, as more manufacturers are entering the market. The

prices a also gradually falling, enticing more customers. The base cement floor should be kept perfectly level, dry and dust free for laying the wood tiles, with anti-termite treatment in areas of termite danger. Mostly wooden floor is being used with other materials as well; hence a transition profile of small curved wooden strip is used to cover the joints.

Also, there will be a small gap between the floor and the wall, conveniently covered by the skirting piece.

After laying there should be a few days' gap before the floor is used regularly.

Problems

Despite the natural goodness of wooden floors, they also have their set of problems. In areas of heavy rainfall, where it is impossible to keep the floor dry, natural wood flooring demands much of maintenance. Only dry mopping or dust sweep is advised on a daily basis, with occasional vacuum cleaning and very rare wet cloth mopping. Susceptible to minor wear, tear and shrinkages, they may get noisier over the years. There have been many complaints not because of the materials but the laying, for laying the floor tiles demands expertise. While most natural floor boards are made from hard wood, they are not fully scratch resistant, so rough handling may lead to surface disfiguration.

Dust and moisture can easily get into the joints, reducing the life of the floor. Above all, the eco-friendly cent per cent wooden boards cost much above the purchasing power of most people. (The writer is an architect working for eco-friendly designs and can be contacted at varanashi@gmail.com)

Samsung offers 'Smart Home Celebrations'

For the upcoming festival season, Samsung India has announced a consumer promotion 'Smart Home Celebrations' which offers attractive gifts on the purchase of audio visual and home appliance products.

As a part of this promotion, the purchase of 46" and above size Samsung Smart LED/ Plasma TV

models in Series 7 and 8 will entitle consumers to a Galaxy Tab 7.0 and an 11 by 1 easy consumer finance scheme. Consumers buying a Samsung 3D TV model from LED Series 6 or a Plasma Series 5 will get a 3D BD Player along with 3D Movie titles worth Rs.10,990, according to a press release issued here.

The LED TV Series 5 will get consumers a free Skype camera and Wi-Fi dongle and all 32" and above size Panel TVs and any Samsung Home Theatre System will offer consumers a free 51 Movie DVD pack.

In the Home Appliances category, Samsung Side-by-Side refrigerators will

entitle consumers to a free Galaxy Tab 7.0 while on the purchase of frost free and direct cool refrigerators, front and top loading washing machines, or the dishwasher, the company will give away a free Samsung mobile phone.

The Smart Home Celebrations is valid till November 30.