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Chhatrapati Shivaji Maharaj
Vastu Sangrahalaya
(formerly Prince of Wales Museum of Western India)

THE MUSEUM



वृक्षवल्ली आम्हा सोयरी वनचरे |
पक्षीही सुस्वरे आळविती ||

संत तुकाराम १६०८-१६४९

In this Abhanga, Sant Tukaram has explained our relationship with nature. He calls trees, animals and birds as our relatives.

The Museum

NEWSLETTER - every quarter

ENVIRONMENT
@CSMVS



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Greetings from the CSMVS, Mumbai!

We are delighted to present Volume 8, Issue 3 (July-September 2015) of the Museum Newsletter – Every Quarter.

I would like to thank all our colleagues and friends for their overwhelming appreciation for the previous issue, 'Education@CSMVS'. Our endeavor, as another of the objectives of the museum, is to address issues that affect directly or indirectly human lives and civil society. The very definition of a Museum has transformed with time, and now alludes to its multi – dimensional role in the development of society and its surroundings.

Keeping in mind the theme of this issue, I began researching our archives and while going through the heaps of old newspapers I discovered an interesting article on the environment that proved to be a wakeup call. The article in question by Justin Gillsⁱ was '*Antarctica's ice to melt if all fossil fuel is burned – A subsequent sea level rise of 200 feet will see London, Paris, New York, Hong Kong and Tokyo being submerged*'. At first glance, the piece seemed like a bit of a hypothesis, but on more careful study a sense of foreboding accompanied my realization of the gravity of the matter. It describes the impact of climate change on coastal cities as,

"The rest of the Earth's land ice would melt along with Antarctica, and warming ocean waters would expand, so that the total rise of the sea would likely exceed 200 feet", the scientists said, "To be blunt: If we burn it all, we melt it all", said Richard Winkelmann, a researcher at the Potsdam Institute for Climate Impact Research, Germany and the lead author of a paper published in the Journal, Science Advances.

"A sea level rise of 200 feet would put almost all of Florida, much of Louisiana and Texas, the entire East Coast of the United States, large parts of Britain, much of the European

Plain, and huge parts of coastal Asia under water: the cities lost would include Miami, New Orleans, Houston, Washington, New York, Amsterdam, Stockholm, London, Paris, Berlin, Venice, Buenos Aires, Beijing, Shanghai, Sydney, Rome and Tokyo".

I suppose Mumbai might be on the list too. This is indication enough that the Global Warming process is already in motion and few sincere collective attempts have been made to address this issue. This concern is also evident in the recent speech by Pope Francis in the United States of America where he raised his genuine concern in the presence of President Obama, when he said, "Mr. President, I find it encouraging that you are proposing an initiative for reducing air pollution. Accepting the urgency, it seems clear to me also that climate change is a problem which can no longer be left to a future generation. When it comes to the care of our common home, we are living at a critical moment of history"ⁱⁱ. Preferring to address the climate change issue to other subjects, the Pope said there was still time to heal the planet for its children.

As one of the important instruments of non-formal public education, museums need to communicate to the public, the current as well as the rapidly changing nature of the environment, and the adverse impacts on the eco-system of our highly urbanised and exploitative society, using its different modes of communication such as research, graphics, digital media as well as exhibits.

Museums and Environment

Today, museums are no longer viewed as merely repositories of antiquities but as centres of informal education and also as civic space for social interaction.



Sabyasachi Mukherjee
Director General

The present issue will highlight the concern for climate change and also the role of museums in creating awareness of the rapid changes in nature among their visitors under the title 'Environment@CSMVS'.

As museums evolve with time and grow in popularity, they become more accountable towards tackling environmental issues. It is a known fact in museum circles that the change of climate outside, adversely affects its collections (made of varied and highly sensitive materials) on display and in storage and therefore museums strongly recommend passive climate environment in their premises. However, do the authorities of museums know how their decision of opting for a climate control system increases carbon footprint in the outside environment every day? This is a matter of concern for museum professionals and authorities all over the world, who now have to rethink their role and reformulate their environment policy in the context of a fast changing climate. In order to avoid any further damage or environmental destruction they have to explore the possibility of adopting a sustainable model of a 'Green Museum' or 'Eco Museum' in their respective spheres.

These terminologies related to the environment enumerate the inter-dependency and an intimate relationship between all things living and the physical surroundings, which we often call 'Nature'. Helen Dizikes, an environment expert explains this concept in her expert opinion in the book titled '*The Rise of Environmentalism in Museums*' by Jean Davalion, G. Grandmont, B. Schiete, "A nature exhibition may describe animals, their methods of adaptation and their behaviours, but to be 'environmental' an exhibition must go further. An environmental exhibition launches a discussion on the degradation of the environment or the dangers confronting animals. And to make certain that the discussion on the environment is exhaustive, the causes and consequences of this degradation must be presented – and the social problems discussed".

It is clear from the above discussion that the greed of people, unplanned rapid urbanisation, massive population growth and the insensitive and uncaring approach of authorities towards nature have resulted in climate change. It is a fact that we need nature for our sustainability but nature does not need us. The question that naturally arises is, how are we to stem this man-made destruction? How do we heal the wounds caused so that our mother earth and living beings may sustain many thousands of years and maintain the ecological balance for the general welfare of humanity and other beings in the universe? According to experts, the present situation can only be prevented or improved, if as a nation we put up a united front in ensuring preservation of our surroundings and natural heritage by enacting effective laws in Parliament. It is also true that only legislation will not be effective, unless we, that is, the authorities and citizens jointly involve ourselves in the cause and demonstrate our sincerity and commitment towards bringing in change.

Indian Approach to the Environment

Indian tradition, philosophy, literature, religion and art

have always demonstrated an intimate relationship between man and nature. It is evident from different sources that most of the Hindu gods and goddesses are representative of varied elements of nature. Sadashiv Gorakshkar, former Director, CSMVS writes in his introduction for the exhibition catalogue *Animal in Indian Art – Theme and Symbol*,

"In the land that comprises of snow clad mountains on the one side and the vast expanse of sea on the other side, has extensive areas both of tropical forests and deserts and has its landscape crisscrossed by mountains and rivers, it is no wonder that nature has created a deep impression on the minds of its inhabitants. And this is prominently manifests in the thought, literature and art of India".

It is a fact that Indian tradition had always acknowledged the boon of nature in its multiple manifestations and passed on to generations these living traditions for preservation. People nurtured it very carefully through rituals, values, customs and daily practices. I leave it to my colleague Mrs. Vandana Prapanna to elaborate on this and you will find a very interesting and informative article on the subject in this Newsletter (See page no.6).

This issue of the Newsletter highlights in the following pages the progressive approach of the Museum authorities towards environment and the conservation of natural heritage, and also its many other path breaking initiatives towards the concept of a 'Green Museum' by way of engaging in rain water harvesting and alternative energy. It is indeed true that some of the initiatives are actually a result of the Museum's continued efforts in the area of Public Private Partnership (PPP) and I take this opportunity to thank all our partners and supporters for their timely help and encouragement. I would also like to congratulate all the contributors (many of them first timers) for their contributions to this newsletter as well as for their sustainable efforts in preserving the heritage precinct.

We hope you find this issue of the Newsletter as enjoyable and informative as the previous ones.

We thank you for your continued support.

¹The Times of India, Mumbai Edition, September 13, 2015

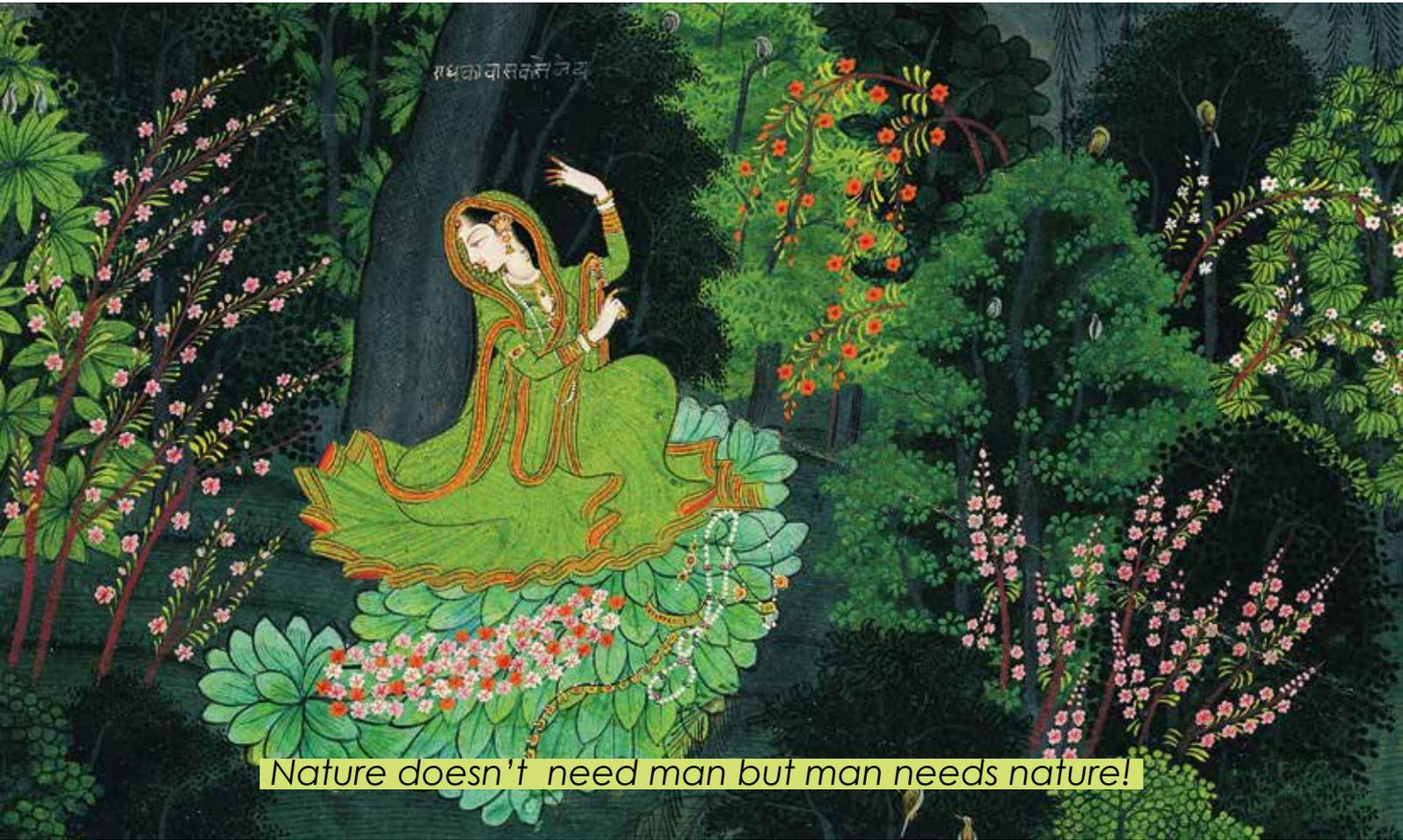
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The Museum garden plays host to a numbers of creatures



Nature doesn't need man but man needs nature!

Conservation of Nature

Vandana Prapanna,
Senior Curator

The word 'environment', is derived from the French word 'environs' meaning 'that which surrounds'. In fact everything, living and non living that surrounds us is environment. Human life is closely linked with its surroundings and its whole existence depends upon nature. But the materialistic needs of man are causing imbalance in the equilibrium of nature. The air and water is getting polluted, the land itself, which is the symbol of fertility, is growing barren, the flora and fauna is getting extinct and there is a major reduction in forest wealth. Mishandling of the natural resources by man for his short term benefits are causing drastic climatic changes. The world today is facing a severe problem related to the environment. Some of the problems are universal and some are area specific.

Sensitive people are now creating an awareness to save and conserve environment. In this context it is interesting to know that originally Indian society was

always eco-friendly and aware about the importance of conservation of environment. The Indian mind always considered environment as a living element directly related to its daily life. Our literature and art is replete with such concerns. It seems that our forefathers had sensed the ecological problems of the future in anticipation and given simple solutions; therefore ancient literature is full of such references where the thinkers are concerned about maintaining harmony among all these basic forces of the Universe. In this article I am presenting some selected examples from Indian literature and art to showcase this fact.

People of India originally were conscious about sanitation and cleanliness since Harappan times. Houses were well lit and inhabitants had high regard for personal hygiene and sanitation. Covered drainage and an example of tree worship on the seals explains the mindset of the Harappan people and their respect towards a healthy environment. In the Vedic age the relationship between man and nature became

more intense and Gods and Goddesses were personified. A very popular hymn reflects the mindset of the Vedic people:

ॐ द्यौः शान्तिरन्तरिक्षं शान्तिः
 पृथिव्यं शान्तिरापः शान्तिरोषधयः शान्तिः।
 वनस्पतयः शान्तिर्विश्वेदेवाः शान्तिर्ब्रह्म शान्तिः
 सर्वं शान्तिः शान्तिरेव शान्तिः सा मा शान्तिरेधि ॥
 ॐ शान्तिः शान्तिः शान्तिः ॥

Be it earth, and its vast expanse or the endless space or water in the river, lake or ocean, the medicinal herbs and the vegetation, the God of universe and the Brahma, the Vedic rishis prayed for peace everywhere.



A Yajna performance

A folio from *Bhagavata Purana*,
 Rajasthani, Mewar,
 c 1645 CE
 CSMVS Acc. No. 2009.302

The literal meaning of *Yajna* is 'to offer'. Vedic people used to perform *Yajna* on various occasions. In the ritual of *Yajna*, various herbs, clarified butter (ghee) and specific food are offered to the fire with chanting of mantras. It is in a way a gesture of gratitude towards nature.

According to Indian theories the Universe is constituted of five basic elements viz. earth, water, fire, air and *akash* or ether. The environment is the combination of all these elements and the interdependence of these elements forms our eco-system.

Nature in the Indian context has always been viewed as a part of divinity and is revered. During the Vedic period, the forces of nature were worshipped by the people to save them from any natural calamity and to pay their veneration to them. The *Atharvaveda* addresses the earth as Mother.



Varuna with his consort

Basalt, Karnataka
 8th century CE.
 CSMVS Acc. No. 575

Water is the greatest boon of nature to mankind and Varuna is "Lord of Water". And hence the Vedic prayer:

शं नो वरुणः

"Be auspicious unto us,
 Oh Varuna!"

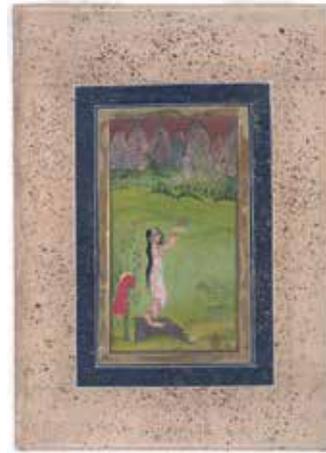


Indra

Gilt Bronze, Nepal,
 18th century CE
 Sir Ratan Tata Art
 Collection
 CSMVS Acc. No. 22.1392

Cloud induces the rain which helps the crops to grow. Therefore clouds are great!

Similarly Indra is the protector of all and therefore he is also great! -*Rigveda*



Sun worship

Lady offering *arghya*,
 oblation to the sun
 Rajasthani, Thikana
 Deogarh, c 1800 CE
 CSMVS Collection

The ancient practice of paying reverence to the sun by offering water is still prevalent in India. Sun is the source of life and energy. It is believed that the morning rays of the sun contain medicinal properties.

The prayer written on the *Puranas* tells us that people were very sensitive about Mother Earth and instead of ruining her for resources, they beg her forgiveness for touching her with their feet in their morning prayer:

समुद्रवसनेदेवी पर्वतस्तनमण्डले

विष्णु पत्निं नमस्तुभ्यं

पादस्पर्शं क्षमस्व मे ।

The inter-relationship between a human being and the elements of nature is reflected in the following verses of *Shukla Yajurveda* :

शिवो भव प्रजाम्य मनुष्याभ्यस्त्व मन्दिरः
 मा द्यावा पृथ्वि अभिशोचीः
 मान्तरिक्ष मा वनस्पतीन् ।

In these verses the sage is wishing for the well-being of earth, heaven and *vanaspati* or plants. The author is equating *vanaspati* with earth and heaven, saying that it should not be destroyed. Why is this special status given to *vanaspati*? Perhaps it is so because in agrarian Indian society there was a lot of inter-dependence on the *vanashree* or forest wealth, and therefore, very serious efforts were made through literature as well as art to protect it from destruction.



Krishna explaining the importance of trees to gopas

An illustration to *Bhagavata Purana*
 Datia, Central India
 Mid 18th century CE
 CSMVS Acc. No. L82.2/4

"Have a look at these trees that live only for the welfare of others while they themselves undergo stormy winds, heavy showers, summer heat and snow and save us from it all.

The birth of trees is auspicious as it contributes to the well-being of all creatures. Just as no needy person returns disappointed from the benevolent, so is the case with a person who approaches a tree for shelter.

They fulfill the desires of others by their leaves, flowers, fruits, shade, roots, bark, wood, fragrance, gum, ashes, coal and tender leaves."
Bhagavata Purana, X 22.30-35

To an Indian mind, nothing was inert. In any case, how can a tree, that gives shelter to man, animals, birds and insects, which freshens the atmosphere with a mild aroma of its flowers and which gives food to all, be inert and lifeless? Long before the confirmation by the Scientist Shri Jagdishchandra Bose,

that, " plant has life ", the sage Vyasa asserts in the *Mahabharata* that plants do possess the sensibilities of sight, smell, taste, touch and also properties of healing. Our ancient literature is flooded with various means and prohibitions to protect plant life as people were aware that plants and trees play an important role in maintaining the regularity of the monsoon season and climate, the ecological balance and soil conservation.

Gradually, the idea received religious support and various gods and goddesses came to be associated with trees and plants. Trees were worshipped both in their original and personified forms, a trend which is also simultaneously reflected through art. The last book of *Rigveda* gives information of plants with special reference to their healing properties as also the boon giving plants (*Kalpavriksha*).



Kalpavriksha, Tree of Life

Ivory plaque
 Deccan, mid 17th century CE
 CSMVS Acc. No.59.19/2

The last book of *Rigveda* gives information of plants with special reference to their healing properties as also the boon giving plants that give sheep, garments and life to the patient. Generally they are depicted as a Banyan or Fig tree.

Along with religious support, the tradition of conserving forest and animal wealth is further strengthened and regulated by social customs and traditions.

There were *vratas* and festivals related to the natural forces. Ancient law makers tried to protect trees from destruction in various ways and religious thinkers made it a religious duty to plant and protect trees and forests. This is expressed in various literature and many of them prescribed punishment for destroying a tree. This kind of injunction ensured a continuity of tree plantation in the country.

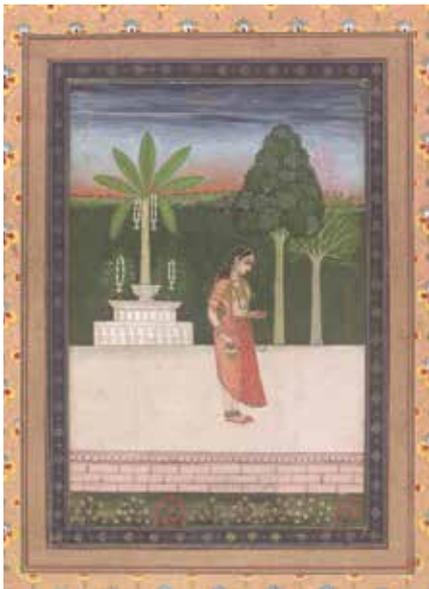
One of the major reasons to protect forests is that the people recognized them as a source of medicinal plants. "May we not destroy the medicinal herbs on Earth on which the learned perform the *yajna*." -*Rigveda*.



Tulsi Pooja

Deccani, Hyderabad
Late 17th century CE
CSMVS Acc. No. 22.3493

Ancient Indian literature makes several references to tree worship and to a special festival called *Vriksha Maha* or *Rukka Maha*, of which tree worship was the main feature. The worship of Tulsi plant is an essential part of Hindu rituals and keeping a Tulsi plant at home is considered auspicious. It is believed that the Tulsi leaf has a unique property of curbing thirst. This could be the reason for placing a Tulsi plant at the entrance to temples so that it can satisfy the thirsty travelers. The plant also has great medicinal properties.

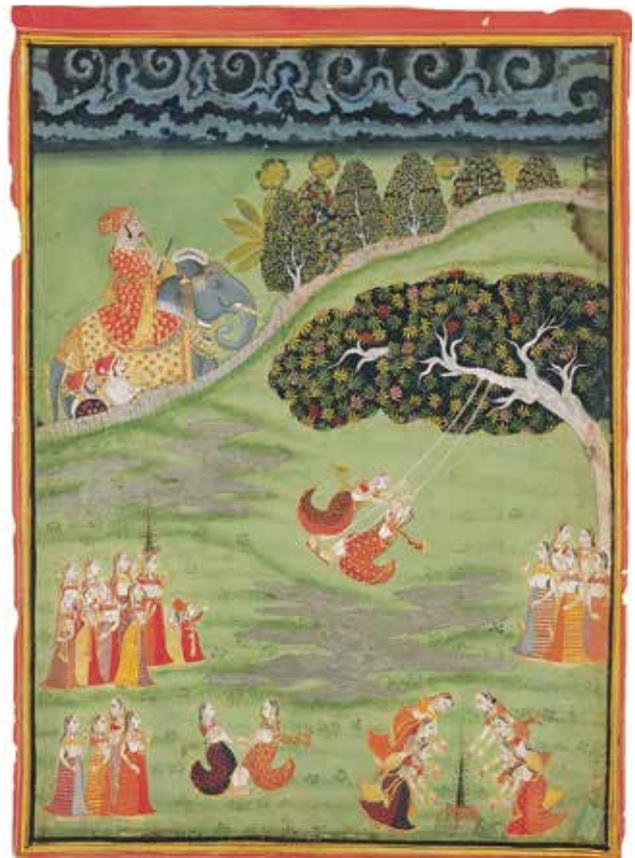


Tree worship

Deccani, Hyderabad
Late 17th century CE
CSMVS Acc. No. 22.3485

Banana tree is considered as a symbol of fertility therefore the tree is worshiped by married women. Those desiring children should worship *Vriksha Devata*.- *Mahabharata*.

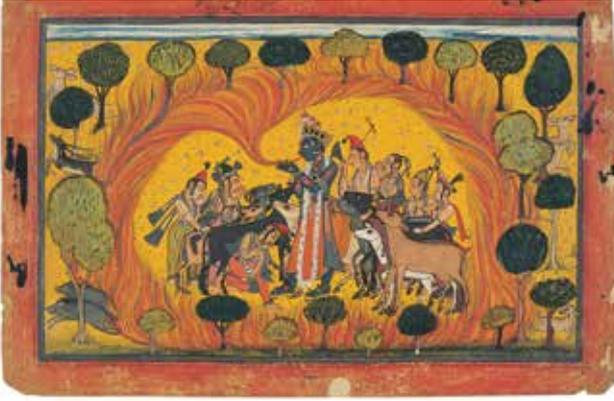
Donating forests was also a part of social responsibility and considered as most meritorious work. The forests were the residing place of the rishis and sages and were called *tapovana*. The *tapovana* or the penance grove is symbolic of man's urge to live in harmony with nature in the wider context. In a *tapovana*, any kind of hunting was forbidden. *Devaraya* or sacred groves dedicated to the *grama devata* or village deity are still a common phenomena in India and such groves in the Sarguja district of Madhya Pradesh and some parts of Maharashtra are presumably the finest examples. Buddhist and Jain literature mention *yaksha ayatanas*, abodes of the *yakshas* or genii. These were groves on the outskirts of villages.



Festival of Teej

Rajasthani, Thikana Delvada,
1761- 1765
CSMVS Acc. No. 52.6

The third day of the bright half of the month of Shravana is commemorated particularly in Rajasthan as an auspicious day when it is believed that Parvati was reunited with Shiva after performing austerities. The occasion is also a celebration of the fresh crops which are worshipped by the women as a symbol of prosperity. The women carrying fresh sprouts in earthen pots go to the outskirts of the town and spend some leisure time in the company of nature to rejuvenate themselves.



Krishna swallowing the forest fire

An illustration to *Bhagavata Purana*,
Pahari, Bahsoli, 1685
Karl and Meherbai Khandalavala Collection
Acc no 2009.11

Once when Krishna and the cowherds had gone to the forest, a fire broke out lapping up everything. Krishna with his superhuman powers swallowed the forest fire. This episode focuses on the conscious realization of the need to protect the bounty of nature at all costs.

Natural resources were considered important not only for human beings but also for the tiniest of insects, animals, mortals and divine beings. Even the leaves of an important tree were protected and were not allowed to go waste. The thought of respect for nature was instilled into the young minds from the very commencement of formal education. The ancient tradition of *Gurukul* where students live in perfect harmony with nature and young minds grew in constant company of rich fauna and flora is a good example of this.

Railing Pillar,

Pauni, Bhandara District,
Maharashtra,
1st century BCE
Acc no 78.91



The railing pillar represents the Hinayana phase of Buddhism. On the top the Buddha is represented in a symbolic form. One of the symbols is the Bodhi tree (pipal tree) under which the Buddha attained Buddhahood. The pipal tree is considered auspicious since Harappan times and is revered by the people of India even today. The interesting thing to note in this image are the two figures, standing under the tree holding a basket to collect the leaf. It is a sacred tree and even the leaf could not be allowed to fall to the ground.

Water which is one of the vital elements of life was equally important. The great rivers of India are charged with a divine entity. Most of the rivers are worshipped and beautiful prayers are sung to glorify their importance. There were water reservoirs, wells and ponds to fulfill the day to day requirements of the people and these were looked after very well by them. There were religious obligations on people to donate these water resources for religious merit.

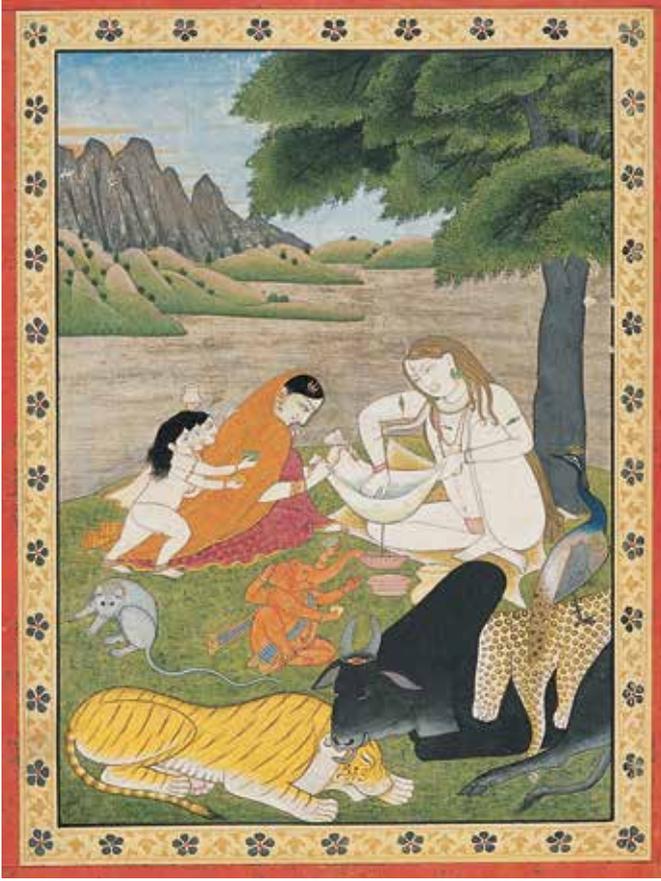


Govardhandhari

Rajsthani, Nathdvara
19th century CE.
CSMVS Acc. No. 78.7/1

In this painting Krishna is lifting the mount Govardhana and giving shelter to the people and their cattle from the torrential rains. He is explaining the importance of forests on the mount Govardhana that attract the rains.

Today, we face a huge problem of water scarcity. Our Harappan ancestors had long ago developed the technology to trap and store rainwater – which we call rainwater harvesting! Dholavira, today a drought zone, has 16 massive reservoirs, which could hold about 21,000 cubic meters of water! The genius residents of Dholavira collected fresh water during the monsoons through dams and channels and directed the water into huge reservoirs, which were connected to wells and pools and used for drinking and bathing.



Family of Shiva preparing Bhang

Pahari, Gaharwal,
end of 18th century CE
Acc. No. 2009.121

The painting represents the Indian philosophy of *Vasudhaiva Kutumbakam*, - kinship of the whole world. The concept of peaceful co-existence in nature is achieved in such animals as the bull who is caressing the tiger, the snake, rat and peacock who are equally a part of the family of Shiva, Parvati and their sons Kartikeya and Ganesha.

The importance of water as a life giving source was acknowledged by the Vedic people. Pure water was termed as *Divya jal* and epithets like *sheetal* (cold), *shivam* (rich with useful elements like minerals) *shuchihi* (clean), *Istham* (transparent) and *vimalam lahu shadgunam* (with controlled pH value) were given to it.

The Vedic people had regard for the climate and natural conditions in various seasons. The effects of seasonal climate on the human, animal and vegetation life were also mentioned in their literature as was the close connection between a season and corresponding agricultural product. Medicinal values of herbs and plants were also known and various kinds of *yajna*, religious sacrifices, were performed to purify the atmosphere.

Sanskrit literary sources and the art forms

inspired by it are to be treated as most valued ancient records, to trace the minute observations made regarding ecology and environment and their efforts towards their conservation.

स्वनामि सुषवे रत्नक्षेत्रे: यस्यं वर्नेगजात
दिशेश वेतनं तस्मै रक्षासद्रशमेयभू

Raghuvansham of Kalidasa

Mother Earth gave jewels to humans from her mines, crops from her fields, plant and elephants (animal life) from her forests. The earth yields her riches to man as long as he judiciously protects and nourishes her riches. This is the message we can derive from the above verse.

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A Peep into the Past: Conserving Forest Wealth, CSMVS publication.



The Green Dot in the Fort Area of Mumbai

The CSMVS Garden

The nature of any civilization is defined by its geology. Humans and their settlements and their resulting cultures are as influenced by the surrounding flora and fauna as by their need to survive and grow. In 1909, a few prominent people gathered to give Mumbai one of its most prized gifts: the Prince of Wales Museum of Western India (now known as the CSMVS) with its beautiful garden. Over the years, the garden and its many different trees have thrived creating a green haven in the heart of Old Mumbai.

In the front of the Museum building is the four-sectioned garden with axial paths that intersect in the centre and is based on the Mughal concept of *char-bagh* which is seen at most medieval monuments like the Taj Mahal. Interestingly enough, there is a subtle marriage of styles even here, where the landscaping is more inclined to mimic the quintessential 20th century British lawn. The careful use of open spaces in front of the building frames the structure charmingly and inspires a more intimate connection with the museum audience.

Manoj Chaudhari,
Assistant Curator (Natural History)

“A tree asks for so little. Yet it gives so much. Trees are man’s oldest friends. Let’s treat them with respect. Colour is the language of Nature”



It has been about a hundred years since the museum with its sprawling garden was conceptualized and over these years Mumbai has seen many changes. Rapid population growth has placed enormous stress on our life support systems-land, water, flora and fauna and the atmosphere. We have witnessed expanding concrete jungles and reducing natural habitat. In the name of growth, environmental resources

have been ravaged and exploited to the point of being endangered or extinct. Mumbai is not exempt from these disasters. Being a metro city and financial capital of the largest democracy, Mumbai's natural resources constantly battle with the demands of capitalism and human greed.

The current land-use survey states that 1.24sq m. of open space (like gardens or parks) per person is available in Mumbai. However, in reality Mumbai has only 2.5 sq. km area as gardens and parks. In this depressing scenario the heritage structure of the museum and its green surroundings provide a soothing relief for the citizens of this busy metropolis; it is like an oasis in a desert of concrete.

So why don't we take a walk around this microcosm and see what we can find? This is an environment we share with artefacts from the forgotten centuries and with life that has been around for even longer than that.

The Museum garden nurtures around thirty different plant species and two hundred and ninety trees of seventy-five different species. The trees not only provide a pleasant environment for those on the premises but also provide shelter to a variety of birds.

The museum began planting these trees in the 1930s. It was like selecting a bouquet for a centrepiece and the types of trees that were picked all worked together to create a support system for the garden world outside the museum. You'll definitely spot the Scarlet Flame with its gloriously vivid clusters of blooms; the Laburnum, which looks like it's raining down yellow sunshine; and of course the evergreen Kadamba and the Bread-Fruit tree, which our local fruit bats use as

their favourite restaurant, and the Mango trees, the fruits of which we museum staff enjoy both raw and ripe.

The branches of a number of these trees have naturally aged and died providing hollow spaces where some species of birds make their nests. Small and dense bushes like Mussaenda, Ixora, Ananta, Caeselpinia are also mini-mansions for our feathered friends.

The Museum is home to more than the mythic beasts of histories past. It happens to be the nesting grounds for a variety of birds, mammals and insects.

In fact about two hundred of India's largest flying mammals have adopted the space as their home. The Fulvous Fruit-Bats generally reside in old, large trees and the museum garden is much obliging. These are otherwise rarely spotted in Mumbai. They spend their day hanging upside down on their trees, making a jolly noise and living the good-life on fruits like Sapota (chikoo) and jackfruit.

The Five-Striped Squirrel is the other popular species sweetly jumping

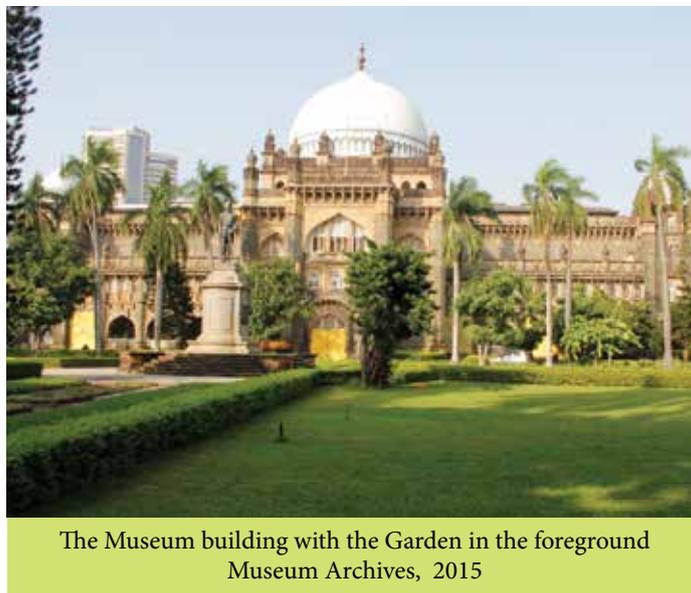
around the museum grounds. There was a time when we observed a fall in their population and sought to rectify the situation by installing earthen pots on the trees to provide safe spaces for their nesting and breeding.

It worked! They are thriving again.

Big cities pose different nesting problems for birds. There are some species of birds that need large trees for nesting and then



The Museum building with the Garden in the foreground
Museum Archives, 1927



The Museum building with the Garden in the foreground
Museum Archives, 2015

there are some that need dense bushes and yet another sort that need a reverse tripod support.

For many of these birds, green spaces like the museum grounds are a stress-free haven where they can nest in peace. You will find Bulbuls and Magpie Robins darting in and out of bushes; there are frequent visits from Mynas, Rose-Ringed Parakeets and Leaf-birds.

Once upon a time, the grounds even hosted Grey Hornbills, Drongos and Sunbirds. But those days are sadly gone.

To create a sustainable environment, the planting process cannot be static. We keep adding to the garden and every addition is carefully thought of. "What will this attract?", "What will this feed?" These questions are very important. For example, twenty years ago a Red Silk Cotton tree was there in the campus. Its vivid flowers attracted life of all sorts beginning with insects like Chestnut-Streaked Butterfly, Sailor Butterflies and more importantly a pretty little insect known as the Red Silk Cotton Bug.



Red Cotton Bug (*Dysdercus cingulatus*)

This bug is vital to the life-cycle of this tree because germination depends on this insect eating the outer-shell of maturing seeds. We have added two more Indian Laburnums to the existing four on the grounds. This species is the larval food plant of the Common Emigrant, Mottled Emigrant and different Grass -Yellow Butterflies. Oh, and parakeets simply love its fruits!

Insects are the tiny wonders without which the environment would disintegrate. One can find a variety of insects here ranging from winged to wingless, a few legged to



Common Baron (*Euthalia aconthera*)



Commander (*Moduza procris*)



Common Evening Brown (*Melantitis leda*)



Dark Grass Blue (*Zizeeria karsandra*)



Common Crow (*Euploea core*)



Common Sailer (*Neptis hylas*)



Danaid Eggfly (*Hypolimnas misippus*)



Common Albatross (*Appias albina*)



Lemon Pansy (*Junonia lemonias*)



Red Pierrot (*Talicada nyseus*)



Peacock Pansy (*Junonia almana*)



Striped Tiger (*Danaus genutia*)

a few hundred legged. You will find butterflies, moths, mantises, spiders, caterpillars...!

One of the adverse affects of fumigation in human populated areas is that the frequent use of insecticides wipes out the insect population as a whole, and not just the pests. Along with mosquitoes, fumigants tend to kill off useful insects like butterflies. This is the price the natural habitat pays for supporting the human population and we might just be left with a world of concrete homes with aquariums, plastic plants and paper butterfly hangings.

The Museum's Natural History section took an initiative to grow larval food and nectar plants which attracted around forty-five different species of butterflies. As a result it is a prime spot for Butterfly-spotting or taking one of the Butterfly-walks organized by the Bombay Natural History Society.



"The best time to plant a tree was 20 years ago. The next best time is today."

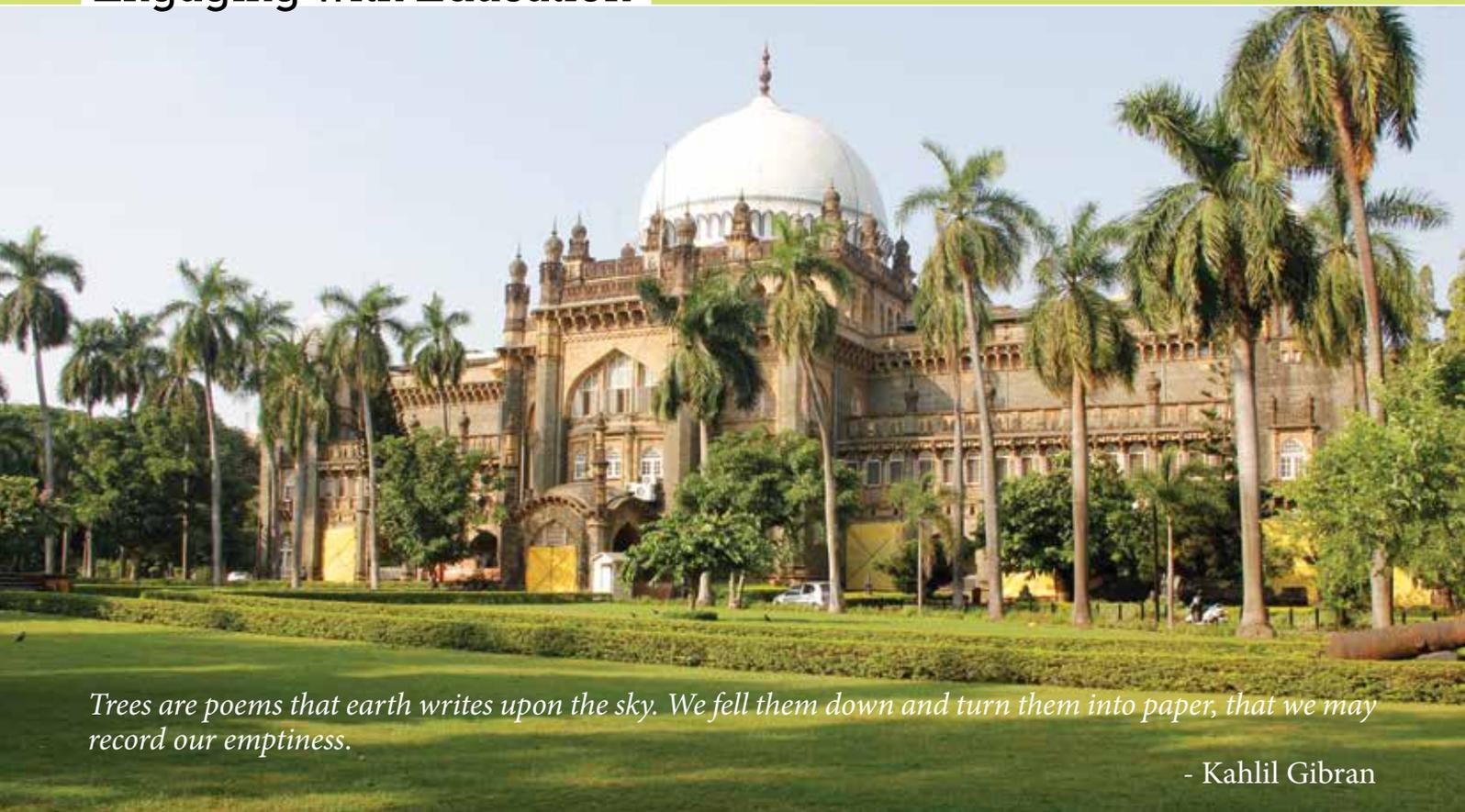
Natural heritage is integral to our mission. The Museum is always conceptualizing projects which aides the environment in different ways. Environmental health begins in our own backyard and supporting species and utilising environmentally friendly practices makes a world of difference.

For instance, the Museum enthusiastically took part in an initiative to 'Save the House Sparrow', wherein we installed 20 earthen pots with narrow holes to create safe nesting grounds. The Natural History department is planning to create a composting centre to add to its bio-friendly gardening practices.

The natural environment works as one body providing support to each individual element. As a heritage institution we recognize the wisdom in this sustainable practice and collaborate with different organizations to spread environmental awareness through public events like World Environment Day, World Sparrow Day and of course, Wildlife Week to engage with people that come to the museum to understand their world; the importance of natural history that we display and nurture will hopefully be understood before it becomes just that: a thing of the past to be viewed inside a case.

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Trees are poems that earth writes upon the sky. We fell them down and turn them into paper, that we may record our emptiness.

- Kahlil Gibran

Tree Guide

Introduction

There has long been a tendency by cultures to worship and mythologize the trees in their surroundings. Trees have been given deep and sacred meanings; their birth, growth and death, the elasticity of their branches, their sensitivity to annual decay and their revival have all been interpreted as powerful symbols.

A tree serves as a symbolic, living link between this world and those of supernatural beings. In many myths, a tree is a vital part of the structure of the universe. With its roots buried deep in the earth, its trunk above ground and its branches stretching toward the sky, one feels as if Gods and their messengers travel between the different worlds by climbing up or down the tree. In some cultures, trees are recognized as a symbol of life, regeneration or even resurrection, while others view the tree as a symbol of sacred knowledge. Even primitive humans revered the power of the tree while utilizing it for heat, shelter, food, clothing and weapons.

In India trees are known for their grandeur and majesty and occupy an important place in its folklore and history. They have always been associated with wisdom and immortality in India. Hindu literature describes a celestial tree

Usha Rajaram & **Manoj Chaudhari**,
Education Consultant & Assistant Curator (Natural History)

as having its roots in the heavens and its branches in the underworld that unites and connects beings of every kind. The Banyan is the National Tree of India. Peepal, Banyan (Bodhi tree), Banana, Neem are some of the trees that hold special cultural and religious significance in India. Indian medicinal plants are no less diverse and significant.

It would seem that these days, we have not only lost the mindset of respecting trees, let alone worshipping them, but we have actually set out to harm them and seemingly wipe them off our planet. We need to relook at agriculture, mining, logging and other environmentally destructive industries to restrict the felling of trees for human greed. A change in mindset is needed, otherwise we will lose our trees and with them we lose their beauty, shade, oxygen and infinite other benefits that are necessary for our existence.

One of the hallmarks of the CSMVS garden is the Mughal *char-bagh*: the highly structured four-part garden laid out with axial paths that intersect at the garden's centre. The planting of the *Taman* tree, from which blooms the state flower of Maharashtra in each centre of the four-parts of the garden became a powerful metaphor for the domestication of the landscape.

A combination of nature and art has been used to create beautiful and refined gardens across the



Common Name : Pride of India / Queen's Flower
Local Name : Jarul, Taman

Scientific Name : Lagerstroemia speciosa

Interesting Facts : Medium to large sized deciduous tree, the leaves and branches originate straight from the tree trunk. State flower of Maharashtra. Timber for construction. Leaves are purgative and diuretic. The leaves and fruits are used for the diabetic. Seeds are narcotic in nature.

Leaves : Simple oblong leaves with a thick stalk and a pointed apex.

Flowers : Clusters of the flowers appear by May June, they are purplish mauve in colour.

Fruit : Egg shaped capsules, pointed tip and have pale brown seeds.



Common Name : Ashoka tree

Local Name : Ashoka / Sita Ashoka

Scientific Name : Saraca asoca

Interesting Facts : The Ashoka is a rain-forest tree. Usually found alongside streams or in the shade of evergreen forests. It's original distribution was in the central areas of the Deccan plateau, as well as the middle section of the Western Ghats. It is a small erect evergreen tree with deep green leaves growing in dense clusters . As a wild tree, the Ashoka is a vulnerable species.

Leaves : Peripinnate with 3-6 pairs of leaflets. Each leaflet oblonge-lanceolate, gradually pendant, and copper-coloured when young with marginal glands near the apex.

Flowers : Orange to orange-yellow turning red in dense heads, often arising on the branches from the wood.

Fruits : Flat pods, leathery with 2-5 compressed seeds.

ages. Artistic contemplations and embellishments have been important attributes to the Roman courtyards, Baroque parks, Renaissance gardens, etc. By placing many beautiful sculptures in the garden the museum has breathed new life into this tradition that almost died out in the last century.

There are around 290 trees of 75 species in the museum, some of which are nearly ninety years old and produce an aura of immortality.



The idea of creating a nature trail for the visitors of the museum resulted from the admiration and respect for these magnificent works of nature. All the trees in the museum were destined to be a part of our heritage and they shall continue to thrive with us.

Key to the identification of trees

To use the key

1. Select a small branch of the tree to observe and examine the twig carefully. If possible, use a magnifying glass.
2. Examine the leaves carefully, their arrangement, nerves, shape, leaf stalk, margin, apex and the type of leaf – simple or compound.
3. Proceed step by step, considering the various parts of the plant, flowers, fruits, seeds etc.
4. Check the description of the plant given in the text with the image.



Common Name: Pagoda Tree/Temple Tree/ Frangipani

Local Name : Gul e Chin , Cini Champa , Khair Chafa

Scientific Name : *Plumeria rubra*

Interesting Facts: Native of Mexico and Guatemala. Migrated via China to India hence the name. Tree is small gouty looking with grayish scaly bark. Blooms throughout the year. Buddhists and Muslims plant it in graveyards hence it is also known as Dead Man's flower. Suitable for gardens and parks.

Leaves: The leaves are found at the tips of branches in a crowded spiral, they are smooth, lance shaped, tapering at both ends. Leaves fall during Nov - Dec.

Flowers: Fragrant funnel shaped flowers in clusters with five petals. Reddish white or white with yellow in center.

Fruit : 12 cms long pods in pairs



Common Name_: Spotted Gliricidia /Mother of cocoa

Local Name : Udir – mar

Scientific Name : *Gliricidia sepium*

Interesting Facts : Native of Sri Lanka. Medium size deciduous tree. The young tree shoots upward. Gliricidia is derived from the Spanish name Mata Raton which means mouse killer. Gliris means mouse and caedo means killer. Leguminous plant, leaves are highly nutritious. Bark of the tree is mixed with rice or maize as a bait to kill rats.

Leaves : Compound leaves on arch like branches, leaf stalk with 8 pairs of leaflets and a single terminal leaflet.

The oblong leaflets have black spots underside hence the name.

Flowers: Pea-shaped pink flowers arranged on a raceme.

Fruit : 10-12 cm long pods with flat seeds.



Common Name_: Copper Pod Tree

Local Name : Yellow Flamboyant, Son Mohur

Scientific Name : *Peltophorum pterocarpum*

Interesting Facts: Native to Srilanka, Malayasia and Andaman region. Tall trees with whitish bark.

Leaves : Dark green leathery foliage bipinnate leaves with 15 to 20 pairs of leaflets.

Flowers_: Fragrant, golden yellow flowers, hence the name Son Mohur. Trees flower from April to July and again from September to November.

Fruit : Reddish brown coloured copper pods which are small, oblong pointed.



Common Name : Jackfruit

Local Name : Phanas

Scientific Name : *Artocarpus heterophyllus*

Interesting Facts_: An evergreen tree, huge fruits hanging from tree trunk, two varieties-Kapa and the Barka.

Leaves : Opposite, elliptical oblong leathery leaves, green shiny above with a large stipule that soon falls off and pale beneath, leathery texture.

Flowers_: Unisexual flowers

Fruit : Oval oblong sweet smelling fruits, skin studded with short spikes, each spike represents a flower in the aggregate in floescence. Seeds are kidney shaped inside a yellow fleshy pulp.



Common Name : Aal Tree

Local Name : Bartondi, Noni

Scientific Name : *Morinda Citrifolia*

Interesting Facts : It's a small tree or a shrub, with yellowish white bark. It belongs to the coffee family and has medicinal properties. Roots yield a red dye. The leaves are used as fodder to rear silkworm and also used to treat ulcers. Trees found in Western India and planted to support pepper vines.

Leaves : Broad elliptical, green, shiny with pointed tips and hairy on both sides.

Flowers : Blooms throughout the year, small white ball-like cluster.

Fruit : Egg shaped fruits, glossy and creamish white when ripe.



Common Name : Rain Tree

Local Name : Vilayati siris

Scientific Name : *Samanea Saman*

Interesting Facts : Native of Brazil, came to India via Sri Lanka. A large deciduous tree upto 15m in height and 20 – 25 in its diameter of crown or umbrella. The leaves are horizontally spread and prevent sunlight and at night or cloudy weather the leaflet pairs fold together and the leafstalk droops. In Malaya this is the forecast of monsoon, and hence the name Raintree. The Cicadas feed on the leaves and their droppings come down like raindrops.

Leaves : Feathery, bipinnate, dark green long leaves, with 8-10 pairs of leaflets, paired opposite sessile without stalk.

Flowers : Flowers look like round silky powder puffs. Pinkish white flowers with long stalks.

Fruit : Pod 15-20 cms long contain 10 - 12 seeds embedded in edible pulp.

Common Name : Bread Fruit Tree

Local Name : Barhal, Dahua

Scientific Name : *Artocarpus altilis*

Interesting Facts : Native of Pacific Islands. The gum is used as a binder as a cement. The root is used in diarrhea and dysentery, the extract of the leaves is poisonous for carpet beetles and cockroaches.

Leaves : Large incised green leaves, ovate or rhomboid with leathery texture.

Flowers : Male and female flowers grow separately on the same tree, flowers between Jan- March.

Fruits : Yellowish green globose Fruits, fruit when roasted looks like bread hence its common name.



Common Name : Flame of the Forest

Local Name : Palash

Scientific Name : *Butea monosperma*

Interesting Facts : Deciduous tree, medium sized, irregular branching greyish light brown bark. Flowers used to make holi yellow colour. Also used for yellow dye. The tree is considered sacred by Hindus and symbolizes the moon. The middle leaflet represents Vishnu, the two lateral ones as Brahma and Shiva. The wood and the leafstalks of Palash are used in Havans.

Leaves : Large compound leaves, with three leaflets ovate in shape, leathery texture. The tree is barren in Nov - Dec.

Flowers : Crimson orange flowers with five petals, one pair unites in front like the parrot, beak or a tiger's claw.

Fruit : Pendulous silky pods, Pale green and turns brown on drying,



Common Name : Coral Wood Tree / Red bead Tree

Local Name : Ratan Gunj

Scientific Name : *Adenanthera pavonia*

Interesting Facts : *Adenanthera* - means stalked glands on one another / *pavonia* means peacock feather like leaves. Native of South-east Asia. Moderately tall tree, bark rough, greyish brown; Goldsmiths used its seeds Ratti for weights. Seeds used for treating boils and inflammations, and the roots are emetic, bark is used for treating rheumatism and gout. Wood is used as a substitute for sandalwood.

Leaves : Feathery, bi pinnate leaf with oblong leaflets arranged alternately.

Flowers : Tiny yellowish flowers on a raceme. Five petals star like and fragrant.

Fruit : 15-20 cm long pod, bright scarlet biconvex seeds; dispersal by birds.



Common Name : Indian Mast Tree / False Ashoka

Local Name : Ashopalav

Scientific Name : *Polyalthia longifolia* var. *Pendula*

Interesting Facts : Native of Sri Lanka. Pyramidal tree, the branches do not spread but remain close to the main trunk. The tree is also called as False Ashoka.

Leaves : Dark green leaves with wavy margins, when tender the leaves are light green, glossy lance shaped, dotted with translucent oil glands. They are used for making Torans.

Flowers : Inconspicuous flowers hidden in leaves appear in clusters in February - March.

Fruit : Bunches of fruits green in colour turns pink when ripe. Bats are very fond of eating them.



Common Name: Flamboyant Tree

Local Name: Gulmohur Tree

Scientific Name: *Delonix regia*

Interesting Facts: Origin Madagascar. Shallow root system and is a victim of heavy storm and gales. It's also known as the Pentacost Tree or the Holy Ghost tree, as its peak flowering coincides with 50 days after Easter.

Leaves: Bi-compound leaves, small oblong leaflets, light green feathery leaves.

Flowers: Appear in April with a scarlet bloom. Found in clusters at the end of branches. One of the petals is slightly larger and variegated in colour.

Fruit: 30-60 cms long flat slightly curved pods. Seeds are like rajma and mottled. They produce a rattling sound when shaken and is used as a rattle by children.



Common Name: Camel Hoof tree/Mountain Ebony

Local Name: Kachnar, Apta, Sona

Scientific Name: *Bauhinia purpurea*

Interesting Facts: Indo Malayan Origin, Deciduous tree. Medium sized with crooked branches. *Bauhinia* refers to the French Botanist brothers who studied it and *purpurea* - refers to the purple petals of the flower. Bark used in the Tanning industry. Wood used for making agricultural implements. The tree also yields gum.

Leaves : Characteristically two lobed, like twin leaves on a stalk.

Flowers: Large fragrant flowers, pinkish purple in colour, flowers from September - December.

Fruit: Flat pods with 12 - 16 oblong seeds.

Leaves used as cattle fodder, or vegetable.



Common Name : Indian Laburnum, Golden shower

Local Name : Amaltas

Scientific Name : *Cassia fistula*

Interesting Facts : Ornamental Deciduous tree, small to medium in size, smooth bark ash coloured when young and rough dark brown when old. Drooping slender branches.

Flowers are eaten by Santhals. The pulp of the fruit is used in Ayurvedic medicines as a laxative and heart diseases; its paste is also applied to cure gout. Juice of the leaves is used to cure ring worm and the hard wood is used a lot for woodwork.

Leaves: Compound leaf bearing 4-8 pairs of leaflets. Leaflets have a smooth upper surface.

Flowers: Bright yellow flowers appear on raceme forming a golden shower.

Fruit: Long cylindrical pipe like rod which is green when young and dark brown when ripe.



Common Name: Banyan Tree

Local Name: Vad, Bargad

Scientific Name: *Ficus bengalensis*

Interesting Facts: Native of Bengal. An Evergreen huge tree with spreading branches having aerial roots. These act as props to support the branches. Suitable for roads and highways. Wadala and Vadodora got their names because of several trees planted there. The one near INS Angre, close to old Central Library, Fort is 450 years old.

Leaves: the leaves are broad and oval with rounded base and blunt apex. Young leaves are smooth shiny, dark green above and pale below. The buds are covered with a conical stipule.

Flowers: Inconspicuous male and female flowers inside the figs.

Fruit: Young figs are green and turn red on ripening.



Common Name: Baobab / Monkey Tree/ Kalpavriksha

Local Name : Gorakh Imli

Scientific Name : *Adansonia digitata*

Interesting Facts : *Adansonia* refers to 18th Century French Botanist. *Digitata* refers to finger like leaflets. African origin, introduced by Portuguese traders. Huge tree trunk tapering upwards, smooth greyish bark, branches on top make it look like it is upside down. Wood is used to make Match sticks; the tree fibre is used to make ropes, bags and strong paper.

Leaves: Alternate, palmately compound, lance shaped leaflet.

Flowers: White with 5 petals, pollinated by bats. Fruit: Gourd like, with a pulp rich in Tartaric & citric acid. Blackish brown kidney shaped seeds.



Local Name : Kadamba

Scientific Name: *Neolamarkia cadamba*

Interesting Facts: A large deciduous tree with a straight trunk and horizontal branches. It is a fast growing tree. The tree is associated with Lord Krishna and planted near the temples. Flowers are used as vegetable. The fruits are edible and medicinal in nature.

Leaves: The large, oval shaped leaves are sometimes broadly elliptic oblong. The tree sheds leaves in summer and blooms during June-July.

Flowers: Yellowish orange ball-like flowers around the size of golf-ball with sweat scent.

Fruit: The fruits are orange in color with small seeds which are dispersed by bats and birds.



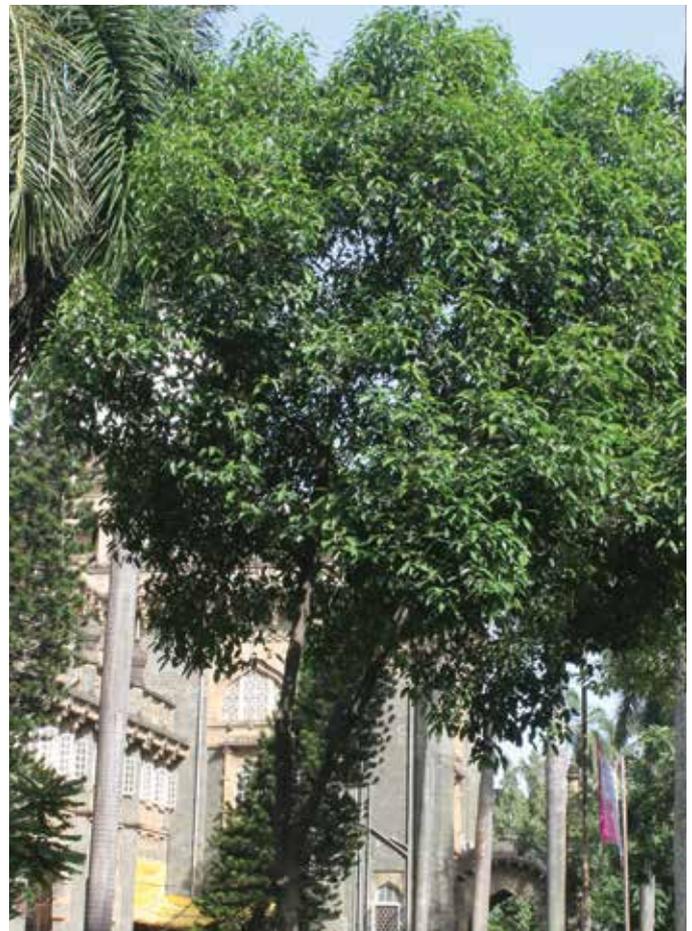
Common Name: Bottle palm, Royal palm
Scientific Name: *Roystonea regia*
Interesting Facts: This palm is indigenous to Cuba. The trunk is shaped like a bottle and is marked with horizontal rings. It is planted in the gardens and avenues for ornamental purposes. Young leaves are used as vegetables. The fruits are eaten by some animals.
Leaves: The leaves are feathery and up to 3 mt long. The basal sheet is tubular and fully embracing the trunk below the crown.
Flowers: Small straw-color flowers in drooping clusters enclosed by two boat shaped spathe.



Common Name: Bakul, Bullet wood, Maulsari
Local Name: Bakul
Scientific Name: *Mimusops elengi*
Interesting Facts: It is a medium-sized evergreen tree found in tropical forests in South Asia, Southeast Asia and northern Australia. Its timber is valuable, the fruit is edible, and it is used in traditional medicine. Flowers are fragrant used in perfumes and as stimulants.
Leaves: Glossy, dark green, oval-shaped, 5–14 cm (2.0–5.5 in) long, and 2.5–6 cm (0.98–2.36 in) wide.
Flowers: Star shaped creamy white and scented. The flowers retain their smell even after drying.
Fruit: The edible fruit is an ovoid berry bright red-orange when ripe with 1-3 seeds.



Common Name: Bengal Quince, Golden Apple
Local Name: Bael
Scientific Name: *Aegle marmelos*
Interesting Facts: It is a native of India and Myanmar. Middle sized. Unripe fruit yields a yellow dye. The fruit is edible and has medicinal value. The leaves serve as larval food for the Common Lime butterfly.
Leaves: Trifoliate compound leaves have ovate, lance shaped leaflets. When the leaves are held against light, their prominent oil glands are clearly visible.
Flowers: Greenish white large in size and are sweet scented. They are used for scenting drinking water.
Fruit: Yellowish grey globose fruit with a hard shell. It has yellowish orange pulp with numerous compressed seeds.



"If the sun were not hung so high, someone would have claimed it long ago."

Early Christian saying

A Little **SUN** for piece of CSMVS

The Solar Energy Project Phase 1

Bhavdatt Patel,
Administrative Officer

The world has always relied on conventional sources from the earth's minerals for producing energy for human consumption. With the advancement of technology and an ever increasing population, the number of energy guzzling devices has been on the rise. The hazardous emissions released as by-products of the use of these minerals, has led to pollution of the environment. These deposits of energy coal, petroleum and natural gas are non-renewable and are rapidly depleting.

It was as early as 1931 that Thomas Edison realised that a long term and enduring solution was required for the energy requirements of the developing world, "I'd put my money on

the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that. I wish I had more years left." As more people

awakened to the fact that alternate sources of energy needed to be investigated, the search began with fervour. Non-conventional sources of energy were explored and those used successfully today include energy from sun, wind, biomass, tidal energy, geo-thermal energy

and even energy from waste material. These forms of energy are abundant, renewable, pollution free and environment friendly.

The importance of renewable energy was



"The natural world around us shows the way to relief. All of life is maintained by the sun, by the air, by water, by the earth and its resources. And to whom was the sun given? To everyone. If there is any one thing that people do have in common, it is the gift of sunlight."

Eberhard Arnold, Vienna, Nov 1929

recognised in India in the early 1970s. The renewable energy programme started with the establishment of the Department of Non-conventional Energy Sources (DNES) in 1982. The Indian Renewable Energy Development Agency (IREDA) was set up in 1987.

The Museum regularly conducts workshops, activities and awareness programmes for the millions visiting the Museum, especially school children. CSMVS has always promoted the use of sustainable methods to address environmental issues. One of the first steps towards this was the establishment of a rainwater harvesting system in 2008 that fulfilled the requirements of maintaining the extensive museum lawns and green areas.

An institution the size of CSMVS uses approximately 55000 units of electricity a month, to power lights, fans, computers and the premises as well. This is yet another carbon footprint being created by the Museum, and therefore CSMVS now started looking into some other forms of energy to power the rising electric needs of the institution. The monthly electricity bill of seven hundred thousand Rupees is a financial strain and it was another reason that prompted us to bring in some form of non-conventional energy.

Being one of the larger cultural institutes in the city and with our work being followed in other parts of India we wanted to install another environmental friendly project that would also serve as an example. The large gardens and the areas surrounding the museum receive sunlight throughout the day, making the decision of adopting solar energy, a clear choice.

Solar Energy

Of the various sources of alternate energy that have been explored, solar energy has been identified as a constant, dependable and abundant resource. The sunlight that reaches the ground consists of nearly 50 percent visible light, 45 percent infrared radiation, and smaller amounts of ultraviolet and other forms of electromagnetic radiation. This radiation can be converted either into thermal or electrical energy. India receives solar energy equivalent to over 5,000 trillion kWh per year which is far more than the total energy consumption of the country. The daily average of solar energy

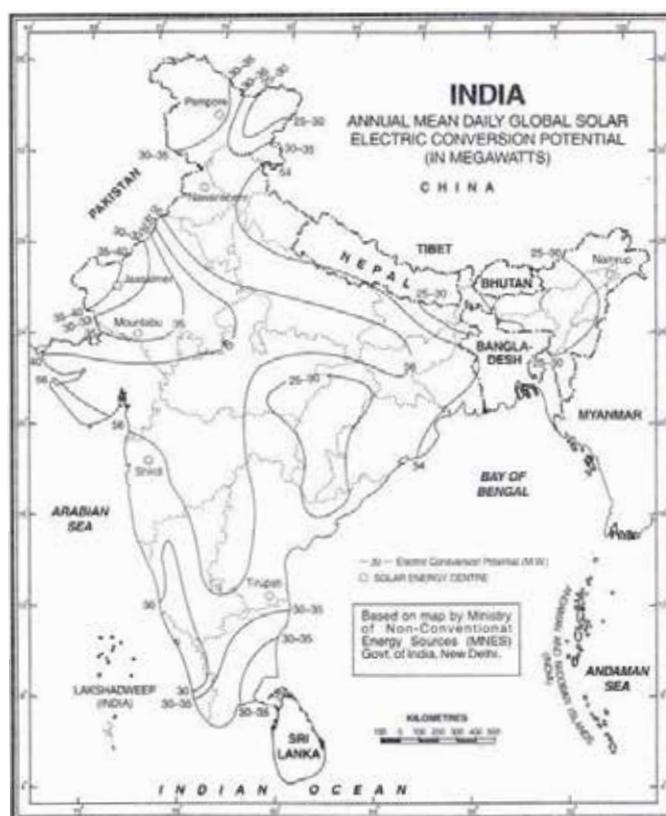
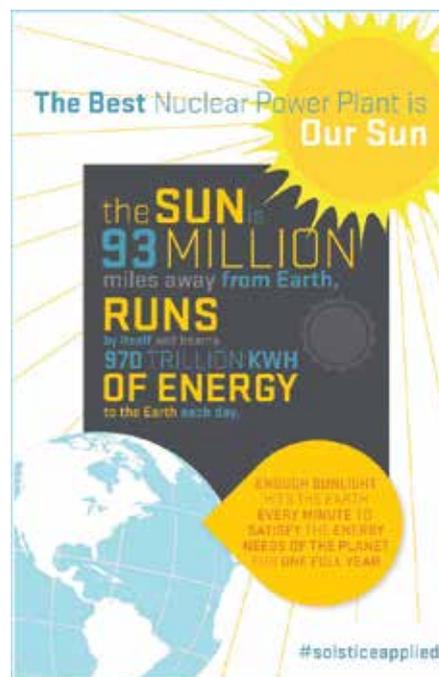


FIG. 26.10. India : Annual mean daily global solar electric conversion potential (in MW) and Solar Energy centres

incident over India varies from 4 to 7 kWh/m² depending upon the location .

The map above¹ shows the annual mean daily global solar electric conversion potential in India. The state of Maharashtra comes under the area earmarked to hold great possibilities of harnessing solar energy with its electric conversion potential marked as 56 MW.

Harnessing solar energy

Solar radiation is converted directly into electricity by photovoltaic cells. In such cells, a

small electric voltage is generated when light strikes the junction between a metal and a semiconductor (such as silicon) or the junction between two different semiconductors. The power generated by a single photovoltaic cell is typically only about two watts. By connecting large numbers of individual cells together, as in solar-panel arrays, hundreds or even thousands of kilowatts of electric power can be generated in a solar electric plant.

Solar Photovoltaic (SPV) technology enables direct conversion of sunlight into electricity without any moving parts and without generating polluting by-products. Photovoltaic systems and power plants have emerged as viable power sources for applications such as lighting, water pumping and telecommunication and are being increasingly used for meeting the electrical energy needs in remote villages, hamlets and hospitals, besides households. The approximate potential of an SPV system is 20 MW per sq km.

Did you know ?

The sunlight that shines on the earth in just one hour could meet world energy demand for an entire year

Solar Energy at CSMVS

The museum undertook a pilot project to install a 12KW solar energy plant consisting of 48 solar photovoltaic rooftop panels. The project was supported by the Rotary Club of Bombay. The project took nearly a year in planning and execution.

The Board of Trustees sanctioned the proposal put forth. Belifal Innovations was entrusted the work of installation based on the recommendation of the Rotary Club of Bombay. The technical details and specifications had to be studied and the most suitable plan for the museum's use needed to be identified. This part of the process took the longest as extensive research needed to be done. The execution of the work was done with the guidance and supervision of the Museum's electrical consultant.

The museum's total power requirement is approx 3000 units per day and with the help of the Grid Solar power plant Phase I of 12 KW, approximately 60 units can be generated everyday during daylight hours, between 10.00 am to 6.00 pm, on a full sunny day. Grid

power and solar power will be put into parallel operation as is done in any regular system. In case of a power failure, there is no system support as this system is without a battery and has no facility for the storage of power. When power fails the inverter will trip and when power is restored, the inverter will need to be started manually to obtain solar power. Grid power automatically starts. Since there is no storage of power, all the power generated from solar energy is directly utilised in the museum thus reducing the electricity consumption.



The Rotary Club of Bombay has not only supported the installation of the project but is also supporting the maintenance of the solar panels for five years. The first phase of the solar project has so far been a success. The planning of Phase II is in process and entails the following:

- 1) An additional 3 KW capacity expansion of solar plant at the existing location.
- 2) Solar Street light fixing in the Museum compound.
- 3) Putting up new solar plant in the Museum of 15 KW capacity at another location to be identified by the Trustees.

CSMVS is now one of the few museums in the world to use solar power in their premises. Apart from the financial and environmental advantages, the installation of the solar energy project also aims to promote best environmental practises for museums in India and the world as well as the sensitise the approximately one million annual visitors to the museum.

End Notes

¹ (<http://www.yourarticlelibrary.com>)

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Curiosity

Manisha Nene,

Assistant Director (Gallery)

The Natural History Section of the Museum was formed with the intention to increase awareness about the flora and fauna of the Indian subcontinent. The section has an interesting display of dioramas which are helpful to make people aware of the shrinking forests and the various animal and bird species that are close to extinction.

The visitors, both children and adults going through the Natural History section are always puzzled how the animal and bird specimens displayed in galleries are preserved and they write queries and comments even as

others stare in wonder and awe. For them they are just stuffed animals. They miss the fact that there is a scientific and tedious process of preserving and mounting the skins of dead animals and birds.

As museum professionals it was our responsibility to enlighten the visitors about this process which is known as taxidermy, the science and art of

preserving, stuffing and mounting the skins of dead animals. The simplest action for this would be putting up a descriptive label explaining the process. However, this would be easily overlooked by those who are in a hurry and give labels a miss.



We decided, therefore, to have interactive sessions for the visitors explaining taxidermy. Actual demonstration was not a possibility to consider. Upon looking into the reserve collection we found old incomplete taxidermy specimens which we thought could be used to describe various stages of taxidermy.

The activity was started as part of the Curiosity Corner of the museum. The Natural History Section staff particularly our Technical Assistant, Shri Ravindra Chafe was excited with the idea.

The activity started in 2012. Every day, for an hour Shri Chafe is ready with his table, set with a specimen kit to explain the process

of taxidermy. He takes deep interest and gets completely engrossed explaining the visitors the taxidermy technique. He explains it in Hindi and Marathi and when there are foreigners, he tries to explain it with a few English words. He changes the level and language of his explanation according to the audience, which ranges from toddlers to senior citizens. On days when there are school visits, he takes special sessions for the students in batches. The audience numbers at these times go more than 500 on some days. These sessions sometimes go beyond 2 hours. Several times, schools, colleges, activity groups and clubs have requested sessions to be conducted for them, even though it may be a holiday. He also arranges special sessions for children with special needs.

Gradually, he has embedded his script for the activity with his observations of nature. While

explaining taxidermy, he now also creates awareness amongst the visitors about importance of trees, birds and animals in maintaining the balance of nature. He also explains the importance and need for rain water harvesting and using solar energy. While explaining all these, Shri Chafe makes use of popular film songs, jingles and stories. Due to this, visitors get attracted and listen to the explanation.

At times he also organises craft activities like clay modelling of animals, birds, making paper masks of animals, puppets etc.

Since the activity has started approx. 80 – 100 visitors participate in this activity daily. Day by day, it is becoming more and more popular and Shri Ravindra Chafe always tries to enrich it.

Visitors' Feedback

A very interesting speaker, it was easy to understand the techniques and I really liked the sensibilisation about birds and the few advices to permit everyone to preserve them. Thanks for all.

- Louis and Nasin, two French students



We are from Karunya Trust. We brought children from Gyansaathi – non-formal education centre for Rag pickers. Our children and staff were so enthralled by his lecture. Thank you so much for this interesting, interactive and informative session.

- Rose Joseph, (with 99 students and 15 teachers)



Excellent explanation given by Mr. Ravindra. He motivated our students to speak and answer. It's a lovely experience to visit museum. Its very informative and realistic for our own children. Thank you.

- Mrs. Nagamani Rao, Aashray special school (with 60 physically challenged students)



Art Conservation and the Indoor Air Environment

Nidhi Shah,
Projects Coordinator

Art Conservation and the Air Environment
One of the aims of art conservation is to maintain a conducive air environment that contributes to the longevity of a historic or artistic work, and at the same time ensure the health and safety of the persons who are working to take care of the collections by taking preventive or remedial measures.

Conservation and Environment, therefore, have a symbiotic relationship and both of them need to be coordinated with each other. The behaviour of the materials, the causes of deterioration, the methods of preservation of an art work in its original condition and its restoration, depends upon the environment in which the art has been kept in. Environmental changes can affect the stability and overall appearance of the art work.

Cultural works are sensitive to environmental conditions such as temperature, humidity and air pollution. Some types of objects are damaged by high temperatures while some

by very low temperatures. Similarly high relative humidity damages some materials while low values can be harmful to others. It is therefore a conservator's responsibility to understand how diverse materials react to diverse values of climatic parameters.

The remedial and preventive conservation as well as restoration of outdoor artworks or objects that are exhibited or permanently installed outside, necessitates an understanding of the environmental parameters. Collections care and environmental diagnostics are two very important aspects for a museum to ensure the health of the collections. For this, climate and pollution control systems, waste management systems, healthcare and safety systems need to be looked into. It is an essential responsibility of a museum to create and maintain a protective environment for the collections, whether they are kept in storage, on display, or in transit.



The CSMVS Museum Art Conservation Centre has a climate controlled environment where temperature and relative humidity is maintained at required parameters 24 hours a day when required.

Climatic Parameters for Care of Collections in India

A great deal of work has been done by conservation scientists and professionals who are in the field of studying and identifying the environmental parameters for the care of collections. We must remember that while low temperatures of prescribed 16-18 degrees Celsius may be valid in a city in northern Europe and it may also be valid in many of the northern regions of India, the same range of temperature may be difficult to maintain in other parts of this vast India. The same is true for relative humidity values. In Mumbai at the CSMVS museum we have arrived at the following values for the care of exhibits that have access to climate control: 54-58% and temperature values of 21-23 degrees Celsius. Where we do not have climate control, we maintain minimum fluctuations of ambient temperature and relative humidity and ensure a regular movement of air. In Mumbai this is fairly easy due to the moderating effect of the sea and the range of the climatic variation is not very high. One must remember that the above cannot be a general prescription. For example, when film material is concerned, then the lowest temperatures possible would be more desirable. Therefore it makes sense to locate a film archives in a naturally cold region of India than in a hot, humid and polluted city.

The Indian sub-continent has a variety of climatic and geographical regions, some of which are cold and dry desert, hot and dry desert, dry and dusty plains, mountainous regions and hot and humid tropical areas. At the same time hundreds of collections in India are spread across the length and breadth of the country with little or no facilities or resources for climate control. Values

of temperatures and relative humidity for care of collections need to be identified in such a manner that they are practical to implement and maintain with the minimum of fluctuations.

Climatic conditions with regards to the temperature and relative humidity in museums in different parts of India need to be studied and appropriate parameters and measures should be suggested for museum collections according to the Indian conditions. For our diverse climatic zones we need to arrive at those values that are easy to maintain on a long term so that fluctuations in the same are avoided.

Air Conditioners

While it seems desirable to have air conditioners, we must remember the purpose of these. If it is only to decrease the temperature, then we must remember that as temperature decreases, relative humidity might increase and this is especially dangerous when there is high ambient relative humidity. In such a case when the AC is switched off, condensation will take place and objects can get moist and this may lead to cockling, warping and mould growth. Air conditioners could also be employed with dehumidifiers. In a place like Mumbai, keeping air conditioners at a temperature value of 22-23 degrees seems practical so that the risk of approaching the dew point is avoided as much as possible, keeping in mind the high relative humidity levels in this region.

Monitoring of temperature and relative humidity

Climate control and monitoring is done through the use of different equipment or instruments such as USB data-loggers, thermo-hygrographs and psychrometers. These instruments are placed in display cases, galleries and storage areas to measure and record information of the environmental conditions.

Instruments such as the data-loggers and thermo-hygrographs record data continuously

USB data loggers can be set to record data at regular intervals which could be, for example, every 5 minutes or every 30 minutes. Some of them can also transmit data as well as warnings over wireless connections. Thermo-hygrographs are usually set for a weekly record when a more accurate graph needs to be acquired.

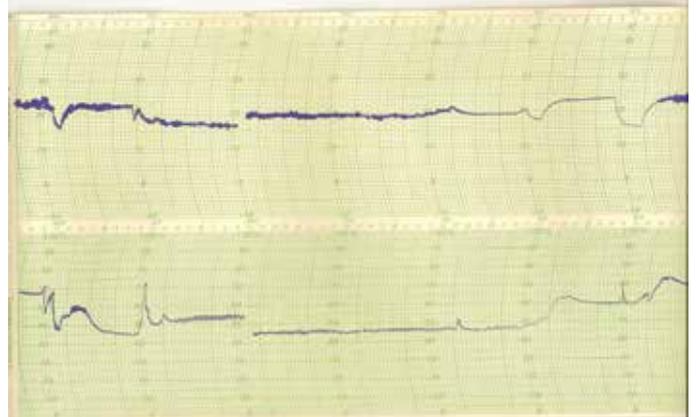
Interpretation of the data can be done by studying the graphs of temperature and relative humidity provided by the instruments and corrective action can be taken accordingly.

This corrective action could involve changing the setting of climate control equipment, repositioning of objects, controlling the visitor movement, implementing infrastructural changes etc.

Laboratory of the National Museum in Berlin and with the Bhabha Atomic Research Centre. The objective was to have a quantitative and qualitative analysis of the gaseous pollutants present in a museum environment.



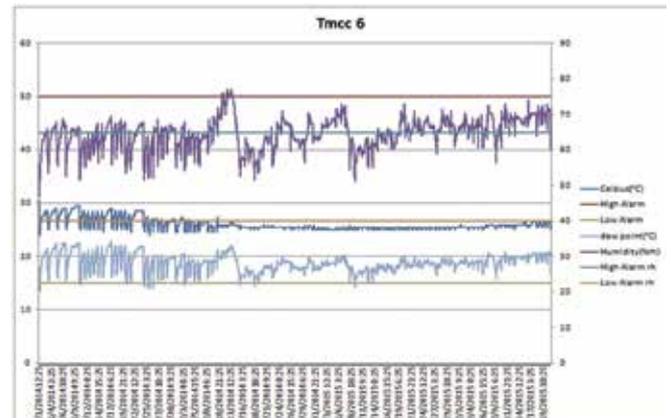
Thermo-hygrograph placed in a gallery to continuously record temperature and relative humidity



Temperature and Relative Humidity readings of a Thermohygrograph



Digital USB Data-logger to record the temperature and relative humidity



Temperature and Relative Humidity readings of a Data logger



Whirling hygrometer or Psychrometer to monitor the temperature and RH



b) A conservator explaining the use of a Psychrometer to trainees at a workshop

Indoor Air Pollution

Two studies on monitoring indoor air pollution were conducted at the various galleries and storage areas of the CSMVS Museum in collaboration with the Rathgen Research

Objective of air pollution monitoring

1. Monitoring temperature and relative humidity in the display cases and textile storage place
2. Measuring gaseous pollutants including: Nitrogen dioxide, Sulphur dioxide, Ozone,

acetic and formic acid and formaldehyde in the display cases, galleries and storage place

3. Measuring particulate matter in the galleries and storage space

According to what we needed to analyse, specific galleries and spaces within the museum were selected to place the monitors. Instruments and samplers such as air exchange monitors, dust / fibre measurement glass slides, passive samplers, metal coupons, and latex bands were placed in climate conditioned/ controlled and unconditioned rooms to monitor the effectiveness of the climate control system and to determine the risk to the collections at CSMVS due to air pollution in the area.

The results did showcase fluctuations in the temperature and the relative humidity of the above mentioned places due to certain outdoor environment parameters as well as due to the inflow of visitors in the galleries. Also there was evidence of some acids such as formic acid and acetic acid in the galleries due to the materials that were used to create the display cases. Corrective action was taken immediately by the administration and curators. This underlines the importance of undertaking such monitoring studies.

Continuous monitoring of the CSMVS Museum environment using 13 data-loggers is creating a data base for us to be able to recommend and implement collection care in a better manner.

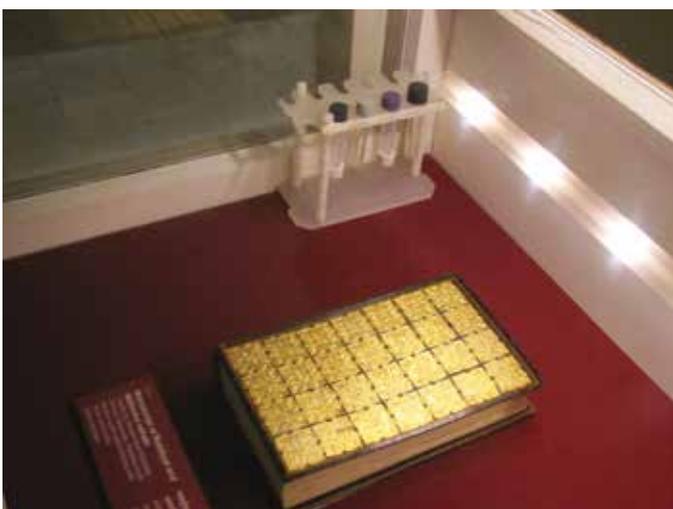


Collaboration with Rathgen Laboratory, Berlin

The Environment at the Conservation workplace

At the CSMVS Museum Art Conservation Centre, we deal with works of art made of diverse materials. It is necessary that each of us are responsible for ourselves as well as for each other, in maintaining healthy air quality at the Conservation Centre. This is important as a lot of particulate matter is released in the environment due to our work that involves removal of dust, dirt, fungus spores and material debris. At the same time some chemicals used for conservation are potentially hazardous and toxic for living beings.

The staff at the conservation centre wear a variety of mouth and nose masks for different types of pollutants. While some masks are to filter particulate matter, there are others with activated charcoal in them that help filter gaseous pollutants. While working with chemicals, the staff ensures that they work in a well ventilated environment and at times have a fume extraction hood next to them. This fume extractor draws away the solvent vapours



Collaboration with Bhabha Atomic Research Centre environmental pollution monitoring team



A Conservator working on an oil painting using a fume hood as health and safety precaution

(from chemicals) and fine particulate (as is generated during laser cleaning), filters it and exhausts clean air into the environment outside.

One must always keep the galleries protected from the outdoor environment to reduce fluctuations of temperature and relative humidity and also use dehumidifiers in the monsoon season and monitor the microclimatic parameters. Various other aspects such as indoor air pollution monitoring, health and safety, waste management, etc. are also very important.

Non toxic insect treatment

When it comes to insect treatment, we, at CSMVS Conservation Centre try to avoid using toxic chemicals to kill insects. We prefer to remove them physically as far as possible and then disposing them in a natural environment. We also prefer to use and advocate the use of anoxic methods of insect treatment. In this treatment, oxygen is removed from an enclosed environment and replaced with nitrogen. The infested materials are kept in this enclosure and are rendered insect-treated without the use of chemicals.

Concluding remarks

Other than the above discussion on the air environment, we also need to address the issue of disposal of solid waste from our work environments, whether they are conservation centres, school and college chemistry laboratories or other work places. There is a need to consciously incorporate guidelines on the disposal of our chemical wastes, no matter how miniscule they may be. We at CSMVS have our own protocol for this and hope that we can improve upon it further.



© CTS Europe
 Example of an anoxicator being used on wooden art work from the Basilica of Santa Croce in Florence



ConservArte
 A Citi-CSMVS Art Conservation Project

Every year, for three years 2015-2017, 150 iconic objects spanning 4000 years of history from the Indus Valley Civilization to the contemporary age, will be conserved and restored at the CSMVS Museum Art Conservation Centre.

These historic and artistic objects will be exhibited at the end of each year; seminars will be held and case studies will be published. Conservators from other institutions will be invited to participate in the project.



Maitreya
 Gilt bronze,
 Nepal,
 19th century A.D.
 CSMVS Museum Collection



1 Ram Kumar: Works In The Jehangir Nicholson Collection

April 25 – August 31, 2015

In collaboration with Jehangir Nicholson Art Foundation

2 Indian Textile and Costume

May 11, 2015

Supported by Ministry of Culture, Government of India & Praful & Shilpa Shah Foundation
Inaugurated by Dr. B. N. Goswamy, Eminent Art Historian

3 Lita Cabellut – Black Tulip: A Modern Interpretation of the Golden Age

June 7 – 20, 2015

Premchand Roychand Gallery
In collaboration with Consulate General of the Kingdom of the Netherlands
Inaugurated by Mr. Mark Rutte, Honourable Prime Minister of the Kingdom of the Netherlands



1

1 The News Rijksmuseum, Old Masters for a New Audience

April 22, 2015
Special Illustrated lecture by Mr. Wim Pijbes, General Director, Rijksmuseum, Netherlands. Auditorium, Museum Visitors Centre



2

2 Putting Heads Together - An All Principals Meet

April 24, 2015
Initiative to increase interaction between schools and cultural institutions
In collaboration with Tender Roots – A Banyan Tree initiative. Auditorium, Museum Visitors Centre



3

3 Legitimizing History: Mughal Chronicles of Akbar's Rule

April 27, 2015
The 17th Karl & Meherbai Khandalavala Memorial Lecture
Slide illustrated talk by Dr. Geeti Sen, an eminent Art Historian
In collaboration with Museum Society of Bombay. Auditorium, Museum Visitors Centre



4

4 When Attitudes Becomes Form: Museums, Nations and Politics

June 11, 2015
Panel Discussion by Sabyasachi Mukherjee (DG, CSMVS), Cho Rao (Art Consultant) and Shilpa Gupta (artist) with Discussant Arshiya Lokhandwala (Art Historian/ Curator)
In collaboration with Mohile Parikh Centre. Auditorium, Museum Visitors Centre



5

5 The Ephemeral Megacity: Mumbai To The Kumbh Mela

The 2nd Sharada Dwivedi Memorial Lecture
June 12, 2015
Slide illustrated talk by Rahul Mehrotra, Founder Principal, RMA Architects; Professor of Urban Design and Planning
In collaboration with Urban Design Research Institute. Coomaraswamy Hall



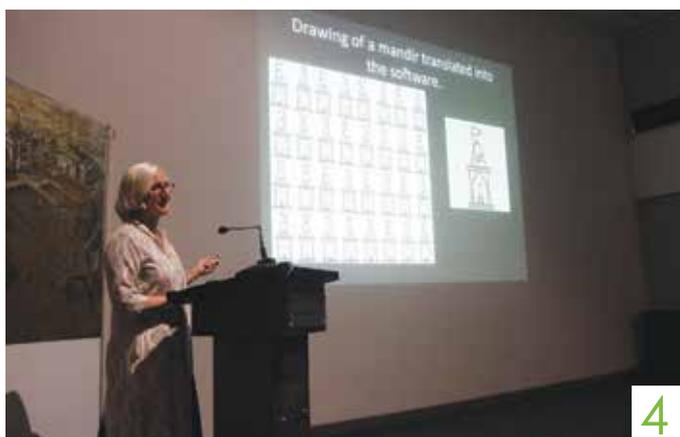
1



2



3



4

1 The Emergence of the Himalayas as a Sacred Landscape

June 17, 2015

Slide illustrated talk by Dr. Nachiket Chanchani, Professor, Departments of History of Art and Asian Languages and Cultures, University of Michigan, Ann Arbor, USA.

Auditorium, Museum Visitors Centre

2 Baadarwa Barsan Ko Aye

June 24, 2015

Monsoon Melodies by Shri Omkar Dadarkar (disciple of Smt. Manik Verma & Pt. Ulhas Kashalkar).

Coomaraswamy Hall

3 Inauguration of Phase – I of the Solar Energy Project

June 29, 2015

In collaboration with the Rotary Club of Bombay.

Auditorium, Museum Visitors Centre

4 Documentation and Design Development of Ikat Weaving: Digital Frontier

June 30, 2015

Slide illustrated talk by Prof. Wendy Weiss, Fulbright scholar, Professor Emeriti of Textile Design, Department of Textiles, University of Nebraska-Lincoln

In collaboration with United States-India Educational Foundation (USIEF).

Auditorium, Museum Visitors Centre



1

2

- 1 **Summer Fun: Fun 'N' Focus**
 April 26 – May 9, 2015
 Fort Photo-Walk by Mayank Soni and Saadia Dhailey
 Make your own Pin-hole Camera
 Pop-Art Pics
 Creative Eye
 A Picture that Speaks a 1000 Words by Mukesh Parpiani

- 2 **Summer Fun: Art Week**
 May 19 – 23, 2015
 Masked for Opera
 Crazy Quilting
 Paint It Kutchi!
 3D Relief Art
 Lippan Art



1



2



3



4



5

1 Art of Serigraphy

April 11, 2015
Silk-screen printing workshop with Rajesh Pullarwar
Seminar Room

2 Museums for a Sustainable Society

International Museum Day Celebrations
May 18, 2015 | 11.00am – 4.00pm

3 Seven billion dreams. One planet. Consume with care

June 6, 2015
World Environment Day Celebrations
Museum Premises

4 Museum Management

June 8 – 12, 2015
Five-day training workshop for Curators from Rajasthan State Archaeology Museums

5 Creative Tree

June 15 to 19th
Art and Creative Activities co-ordinated by Mrs. Mamata Mukherjee
In collaboration with Adapt centre, Chembur.
Part of the Museum's Educational Outreach Programme

Inauguration of the Textile gallery

May 11, 2015



July 5, 2015

Museum Kids Club - Lippan work

Workshop on rural art through Lippan work using clay and decorative mirrors to create mural pieces.
Seminar Room | 11 am - 3 pm

July 7, 2015

Guided tour for delegates of the International Physics Olympiad

In collaboration with The Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research.
Museum Premises | 2 - 5 pm

July 17, 2015

Repairs and Restoration of the Esplanade House, Mumbai

Slide illustrated lecture by Mr. Vikas Dilawari, Conservation Architect.
Auditorium, Museum Visitors Centre | 6 pm

July 22, 2015

Printscapes

Workshop for students from CASE about the various techniques of print making.
Seminar Room | 10.30 am – 1 pm

July 22 to 24, 2015

Director's Take

Film screening of selected documentaries produced by the Museum followed by an interaction with the filmmakers.
Supported by the Ministry of Culture, Government of India.
Auditorium, Museum Visitors Centre | 6 – 7 pm

July 29, 2015

The Futures of Abstraction

Panel discussion by Manish Nai, Dadiba Pundole & Prof. Mustansir Dalvi; Chaired by Ranjit Hoskote
In collaboration with Jehangir Nicholson Art Foundation.
Jehangir Nicholson Gallery | 5 – 6.30 pm

July 25, 2015

Pottery Lab

Pottery Workshop by Mrs. Mamata Mukherjee on various traditional pottery techniques like slab, mould and wheel.
Seminar Room | 11am - 2pm

August 1, 2015

3D Relief workshop

Workshop on making images in 3D.
Seminar Room | 11am - 2pm

August 2, 2015

Museum Kids Club - Crazy Quilting

Workshop on creating vibrant pieces using the patchwork technique.
Seminar Room | 11 am to 1.30 pm

August 17, 2015

Convocation Ceremony of 2nd Built Heritage Studies and Conservation Certificate Course

Talk by Shri V. Ranganathan IAS (Retd.)
In collaboration with Mumbai Metropolitan Region Heritage Conservation Society and Sir J.J. School of Architecture.
Coomaraswamy Hall | 6 pm

August 20 and 21, 2015

Abstract Painting

Workshop on the exhibition, Ram Kumar: Works in the Jehangir Nicholson Collection.
for students of J. B. Petit High School for Girls, Mumbai

August 21 - 23, 2015

Film Festival

A screening of selected International and National award winning Indian Cinema.
In collaboration with Doordarshan.
Auditorium, Museum Visitors Centre | 11 am to 7 pm

THE MUSEUM
MUMBAI

msb

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya
(formerly Prince of Wales Museum of Western India)

in collaboration with
The Museum Society of Bombay
presents an exhibition

**Indian
Coat Of Arms**
भारतीय मानचिह्ने

10th Sept. to 9th Oct. 2015
10:15 a.m. - 6:00 p.m.
(except 14th September & 2nd October)
Curators Gallery, first floor
extension building, CSMVS

Museum Events and Activities

- July to September 2015

August 26, 2015

Money Money!

Workshop on Money for students from Citi Academy for Special Education.

Seminar Room | 10.30 am – 1 pm

August 26, 2015

Mumbai's Timeless Heritage

Illustrated Lecture by Mrs. Brinda Somaya
In collaboration with Museum Society of Bombay.
Auditorium, Museum Visitors Centre | 6 pm

August 27, 2015

Rakhi Making Activity

Seminar Room | 10 am – 1 pm

August 28, 2015

Teacher Training Workshop

Workshop on communications for Teachers of Citi Academy for Special Education.

Seminar Room | 10.30 am – 1 pm

September 6, 2015

Museum Kids Club - My Friend Ganesha

Workshop about the popular God of Maharashtra and eco-friendly ways of celebrating the Ganesha festival.

Seminar Room | 11 am to 1.30 pm

September 5, 6, 12 and 13, 2015

Ganesh idol making workshop

Eco-friendly Ganesh workshop conducted by Shrikant Deodhar.

Seminar Room | 11 am to 2 pm

September 10 – October 9, 2015

Indian Coat of Arms
Curated by Shri Anuj Pakvasa.
Curator's Gallery

September 15 - 16, 2015

Money Money!

Workshop on Money for students from J. B. Petit High School for Girls.

Seminar Room | 10.30 am – 1 pm

September 16 - December 31, 2015

Unpacking the Studio: Celebrating the Jehangir Sabavala Bequest

Curated by Mr. Ranjit Hoskote.
Jehangir Nicholson Art Gallery

September 16, 2015

Woven Chronicles and Other Stories: An Encounter with Reena Kallat

A special talk with contemporary artist Reena Kallat
In collaboration with JNAF.

Auditorium, Museum Visitors Centre | 5.30 pm

September 21, 2015

Launch of ConservArte: Citi-CSMVS Art Conservation Project and Citi-CSMVS Museum on Wheels Project

A partnership between Citi and CSMVS.
Key Gallery | 11.30 am

September 22, 2015

A Brief Exposure to Creative Process & Communications

Session for Jamnalal Bajaj Institute of Management Studies.

Seminar Room

September 22, 2015

Confronting Napoleon in Kutch, 1800 – 1815

Illustrated Lecture by Dr. Mariam Dossal, eminent historian.

Auditorium, Museum Visitors Centre | 6 pm

September 23, 2015

Noah before the Ark

Illustrated lecture by Dr. Irwing Finkel.

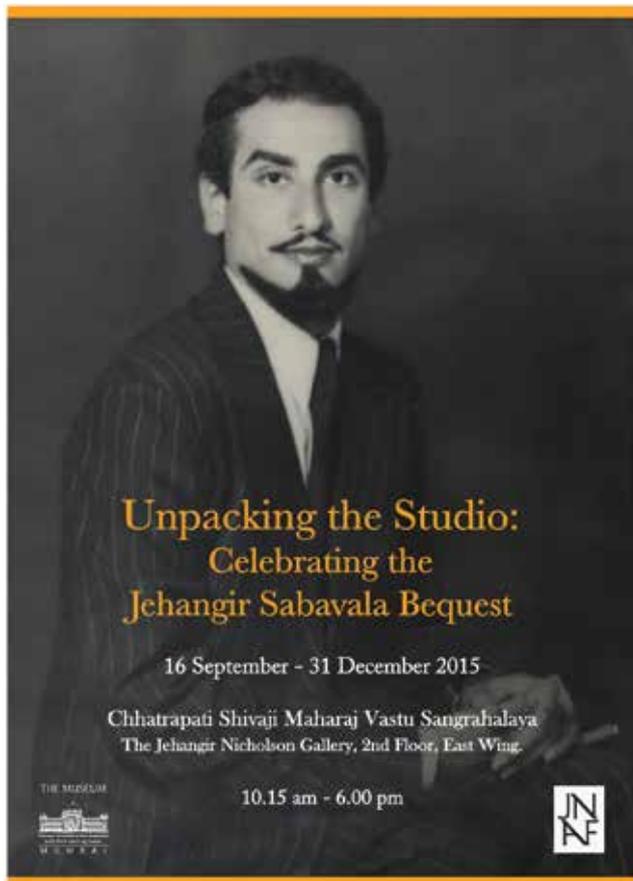
Auditorium, Museum Visitors Centre | 6 pm

September 23 - 24, 2015

Money Money!

Workshop on Money for students from J. B. Petit High School for Girls, Mumbai

Seminar Room | 10.30 am – 1 pm



THE MUSEUM



paramparik karigar
an association of craftsmen

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, Mumbai.
(formerly Prince of Wales Museum of Western India)
and
Paramparik Karigar

are jointly organising

Art and Craft Workshops

with the Master Craftsmen

Sunday, 25th October to Friday, 30th October 2015

11.00 am - 4.00 pm

Seminar Room, First Floor, Extension Wing, CSMVS

Sunday 25th
AJRAKH PRINTING
Khatri Abdul Rauf

Monday 26th
CHIKANKARI EMBROIDERY
Gulam Abbas

Tuesday 27th
PALM LEAF ETCHING
Narayan Das

Wednesday 28th
CHERIAL PAINTING
Nakash Vaikuntam

Thursday 29th
PICHWAI PAINTING
Kalyan Mal Sahu

Friday 30th
BANDHANI TIE AND DYE
Naushad Khatri

Fees per workshop: ₹800/-

Payment to be made at the Museum Office in CASH or by BANK DRAFT in the name of
Chhatrapati Shivaji Maharaj Vastu Sangrahalaya

Limited seats are available

Registrations will open from 1st October 2015 and will be taken on all days
between 11:00 am & 4:00 pm

For detailed information on the workshops visit
Museum Office/ Information Centre

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, 159-161, M.G. Road, Fort, Mumbai - 400 023.

Tel. No. 22844484 / 22844519 Website: www.themuseummumbai.com

Email: csmvsmumbai@gmail.com

Face book: www.facebook.com/CSMVS

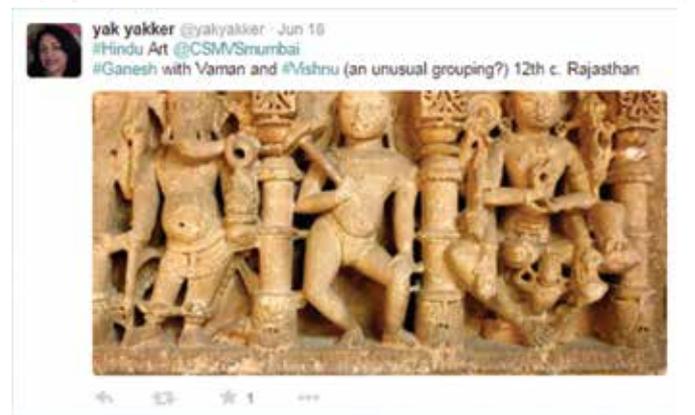
or contact

Website: www.paramparikkarigar.com / Facebook : www.facebook.com/ParamparikKarigar

Email: paramparik@gmail.com

Participants may bring their own lunch or avail the services of the Museum cafeteria

Reema Gehi @ReemaGehi · Jun 1
 The story of the restoration of @CSMVS Mumbai's most ambitious oil painting conservation project, Sword of Damocles: [mumbaimirror.com/mumbai/others/...](http://mumbaimirror.com/mumbai/others/)



CSR info @CSR_RT · Jun 25
 RT @CSMVS Mumbai: Our Tiny steps towards a sustainable Environment zpr.io/fjKzN #gogreen #environment #sustainability #carbonoffset

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya added 3 new photos.
 Published by Allan Oscar Ritchie (7) · 30 June · 🌐

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya goes #Green.
 Under Phase I, The Museum now has a 12KW solar energy plant consisting of 48 solar photovoltaic rooftop panels, they will generate around 2,000 units a month on a sunny day.
 Phase – I of the Solar Energy Project inaugurated by the Trustees of CSMVS and the Rotary Club of Bombay on Monday 29th June 2015... See More



582 people reached Boost Post

Like Comment Share

You, Divya Pawathinal, Sanskriti Chatterjee and 12 others like this. Most Recent +

1 share

Khushnaz Y. Khambata Well done!!
 Like Reply 30 June at 18:13

Mehroo Karbhari Rotary Club shd undertake more such projects. Keep it up.
 Like Reply 30 June at 20:28

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya
 Published by Bhaia Kulkarni (7) · 24 June · 🌐

We feature in today's Mumbai Midday: A wonderful article about our brilliant interns and their experiences during the summer internship at the CSMVSI



We are the cool kids
 Ever wondered how immersive it would be to spend two months as a guide inside a Mumbai museum? As CSMVS and Dr Bhaia Daji Lad City Museum offer internships, we go behind the scenes to hear these stories
MID-DAY.COM

1,163 people reached Boost Post

Like Comment Share

Divya Pawathinal, Candida Remedios, Nidhi Shah and 12 others like this.

Ranjit Hoskote @ranjithoskote · Jul 8
 >This celebrates the gift that Jehangir's wife Shirin & daughter Aafred have made to @CSMVS Mumbai: J's last paintings & a precious archive.

Ranjit Hoskote @ranjithoskote · Jul 8
 I am delighted and honoured to curate an exhibition of Jehangir Sabavala's work in its multiple contexts for @CSMVS Mumbai this September. >

Ranjit Hoskote @ranjithoskote · Jul 8
 The Jehangir Sabavala show I'm curating at @CSMVS Mumbai develops other narratives than his retrospective, which I curated at NGMA in 2005.

yak yakker @yakyaker · Jul 22
 @quizzicalpy @LundOnHistory Seen @CSMVS Mumbai (a Mumbai museum I love) @Akbar's processionary armour



RETWEETS 6 FAVORITES 9

8:58 AM · 22 Jul 2018 · Delhi

Reply to @yakyaker @quizzicalpy @LundOnHistory

Historyland @LundOnHistory · Jul 26
 @yakyaker @quizzicalpy @CSMVS Mumbai impressively physical looking! Says, 'I'm a ruler but also a warrior'.

Manimugha Sharma @manimugha · Jul 26
 @yakyaker @LundOnHistory @CSMVS Mumbai I think I have seen this one at the museum. I went there in 2004.

Historyland @LundOnHistory · Jul 26
 @quizzicalpy @yakyaker @CSMVS Mumbai loved it, had to visit India to see it all!

Geeta Rao @geetarao · Jun 8
 @CSMVS Mumbai spent the morning at the museum -with Ram Kumar & the textile gallery worth a visit, next Black-Tulip



CSMVS @CSMVS Mumbai · Jul 11
 Film Screening: Director's Take. Screening of few docu produced by the Museum. 22-24 July 16 goo.gl/09yT5P



The ADM @theADMorg · Jul 11
 @CSMVS Mumbai thanks for sharing CSMVS. have a great Sunday :)

Divya Pawathinal @dimipawthinal · Jun 29
 Inauguration of solar energy panels phase 1 @CSMVS Mumbai w/ Rotary Club of Mumbai



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-  instagram.com/csmvsmumbai
-  youtube.com/user/csmvs

New Acquisitions



1



3

2

1 Images of Indian Gods and Goddesses

Porcelain
Germany
Early 20th century CE
Gift of Smt. Rekha Naik

2 Piano babies

Bisque porcelain
Germany
Early 20th century CE
Smt. Rekha Naik has gifted 101 German
and bisque porcelains in memory of Late
Dr. Deepak Srinivas Naik

3 Bedspread

Cotton with patch work

&

Table cloth

Cotton crochet work
Early 20th century CE
Woven by Kamal Naik
Gift of Rekha Naik in memory of Kamal Naik
Smt. Rekha Naik has gifted 168 textiles in
memory of Mrs. Kamal Srinivas Naik

Activities of the Museum Society of Bombay

15th April "Other Modernities: Peabody Essex Museum and Indian Art"- a talk by Mr. Dan Monroe and Ms. Sona Dutta, Director and Curator, respectively, of the Peabody Essex Museum to an enthusiastic audience. The event was in collaboration with the NGMA, Mumbai, CSMVS and the Museum Society of Bombay.

20th April "Indian Deities and Legends" a slide presentation by Mrs. Marina Dutta for 25 mentally challenged adults from MANAV Foundation. Supported by a well-wisher, the presentation was greatly appreciated by the participants for its interesting content and educational value.

25th and 26th April "Chaturanga: Exhibition of Ancient Board Games" was jointly conducted by MSB and St. Xavier's College (Autonomous), Mumbai, at Veer Savarkar Udhyan Borivili. The event was graced by Shri Vinod Tawde, Minister of Higher Technical Education & Cultural Affairs, Government of Maharashtra; and Shri Gopal Shetty MLA. Approximately a thousand visitors across age groups visited the exhibition which was conducted by Dr. Anita Rane-Kothare, assisted by Mr. Jason Johns and a team of students from the Department of Ancient Indian Culture, St. Xavier's College (Autonomous), Mumbai.



26th April A one-day trip to the Marine Museum, Nhava was organised by Mrs. Marina Dutta. The visit gave the participants an interesting insight into the very significant maritime heritage of India.



27th April The 17th Karl Khandalavala Memorial Lecture by Dr. Geeti Sen, Cultural Historian and Author, on the topic "Legitimizing History: Mughal Chronicles of Akbar's Rule", at the Visitors Centre, CSMVS and was attended by an enthusiastic audience of varied ages.

22nd -31st May MSB, in collaboration with Department of Ancient Indian Culture, St. Xavier's College (Autonomous), Mumbai, organized a trip to Dharamsala, Kullu-Manali and Chandigarh including sites like Sanghol



Stupa and Masroor rock-cut temples. The highlight of the trip was an opportunity the participants had to have a private meeting with His Holiness the Dalai Lama at his residence in Dharamsala.

1st June Mrs. Marina Dutta conducted a clay modelling workshop on Indian deities for 25 mentally challenged adults from MANAV Foundation. Through clay-modelling, participants were able to familiarize themselves with the deities in an interesting and interactive manner.

14th June Fifty students from IIT Powai, accompanied by their teachers, were taken on a field trip to Kanheri Caves, Borivili, by Dr. Anita Rane-Kothare. The trip proved to be an enlightening experience for the very receptive participants.

20th June Students from IIT Powai and their teachers were taken on a heritage walk around "South Bombay" by Dr. Anita Rane-Kothare. The participants were amazed to see and learn about the rich history of Mumbai.

Forthcoming Programmes:

1st July: "A Zoroastrian Vision" a lecture by Dr. Almut Hintze; in collaboration with CSMVS at 6:30 p.m. at the Visitors Centre, CSMVS.

July: Two Reading Readiness Programmes with flash cards for children from ADAPT, Colaba and Balanand, Chembur will be conducted by Mrs. Marina Dutta, and sponsored by well-wishers.

July-August: Mrs. Marina Dutta will be conducting three tours of Jamini Roy's paintings on display at the NGMA, Mumbai for three NGOs, including Bhavishya Yaan and Aakanksha Foundation. These tours are being sponsored by well-wishers and will have follow-up activities such as creating collages, drawing, colouring, patta-chitra making, etc.

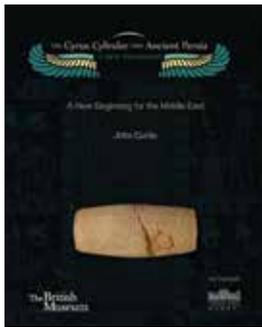
1st August: The 9th Mani Kamerkar Memorial Seminar, a one-day State level seminar on the "Maritime Heritage of India", in collaboration with the Department of Ancient Indian Culture, St. Xavier's College (Autonomous), Mumbai, MSB and the Heras Institute.

August: An inter-active presentation on Indian Deities and Legends, followed by a clay modelling session for children to be conducted by Mrs. Marina Dutta for children from Akanksha Foundation, Chembur and sponsored by a well-wisher.

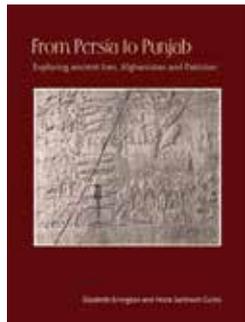
August: Slide presentations on the Indus Valley Civilization, followed by a recapitulation of the subject using flashcards and a clay-modelling session of Indus Valley artefacts for children from the NGO MANAV on two days.

10th September to 9th October: "Indian Coat of Arms", an exhibition curated by Mr. Anuj Pakvasa, eminent numismatist and Life Member of MSB, in the Curators Gallery, CSMVS.

Museum Shop



Cyrus Cylinder and Ancient Persia-Catalogue
Rs.500/-



From Persia to Punjab
Rs.500/-

Faravahar Bookmark
Rs.175/-



Faravahar Book (Gold)
Rs.175/-

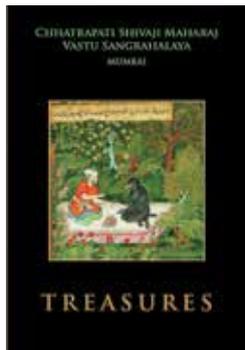
The Museum Shop contributes towards promotion of Indian culture through different art materials. There is a wide range of books, published by the Museum as well as renowned publishers. The Shop also displays different articles such as greeting cards, posters, brochures, folders, letter-paper sets, gift-wrapping papers and bags inspired by design/details of the art objects from the Museum collection. Bead necklaces, repousse copper plates, embroidered silk scarves, purses and table pieces are among other articles available in the Shop. Our visitors take these as small mementos of their visit to the Museum.

Informative educational trails and kits are available for students, which help increase their interaction with the Museum.

Buy and Help us Preserve our National Heritage!



Flemish Masterpieces from Antwerp
Rs.100/-



Treasures - A selection of 100 objects
Rs.250/-



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Research Library: New Arrivals

- Art of Three Tagores – From Revival to Modernity
Parimoo, Ratan
- A Bouquet of Indian Heritage, Research and Management
(Dr. Agam Prasad Felicitation Volume)
Srivastava, Prashant & Mahapatra, Sanjaya Kumar ed. (2 Vols)
- Classification of Fishes
Harmer, S.F & Others (2 Vols)
- Humsafar The Companion: The Story of Indian Textile based on the CSMVS Collection
Prapanna, Vandana and Nene, Manisha
- Making a Museum in the 21st century
Chiu, Melissa ed.
- Nalanda - Situating The Great Monastery
Asher, Frederick M.

The CSMVS Collection

The Museum has a representative collection of various forms of art from India and to a certain extent, Far-Eastern art, Nepal and Tibet. The Natural History section is a major attraction for children.

Ancient Indian art is represented by the Stone Sculpture gallery with sculptures from Elephanta and other important sites especially from Western India. The Indian Miniature Painting collection represents one of the best collections of miniatures in the country. The Museum also has a magnificent collection of Decorative Art objects in jade, wood, ivory, metal and textiles. The Nepalese and Tibetan artefacts are ascribed to important religious and artistic phases of these regions.

The Numismatic collection, acquired from various well-known hoards and also from individual collections, covers an entire range of materials and regions. The Museum houses an interesting collection of Chinese and Japanese porcelain, metal and ivory objects and embroidery. European oil paintings and Indian arms and armour also form an important part of the collection.

The Museum collection comprises purchased artefacts as well as gifts by generous donors like Sir Ratan Tata and Sir Dorabji Tata. The major section of the European and Far-Eastern art and also representative examples of Indian art belong to this collection. The priceless artefacts from the Buddhist site of Mirpurkhas, excavated by renowned archaeologist Henry Cousens in 1909 are an important part of the Museum collection. Seth Purushottam Mavji's collection of antiquities and miniatures along with a multitude of other collections such as those of Sir Akbar Hydari, and Karl and Meherbai Khandalavala as well as antiquities acquired from the Archaeological Survey of India have contributed towards the grand collection of the Museum.

Trustees on the Board of Chhatrapati Shivaji Maharaj Vastu Sangrahalaya

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Collector of Mumbai
The Principle Secretary, Tourism &
Cultural Affairs Dept., Government of
Maharashtra
The Superintending Archaeologist,
ASI, Mumbai
The Superintending Archaeologist,
ASI, Aurangabad.
The Superintending Archaeologist,
ASI, Vadodara.

The Museum Staff

Sabyasachi Mukherjee, Director General
Manisha Nene, Asstt. Director (Gallery)
Vandana Prapanna, Senior Curator
Ajay Kochle, Asstt. Director (Admin)
Anupam Sah, Art Conservation Consultant
Bhavdatt Patel, Administrative Officer
Aparna Bhogal, Assistant Curator
Dr. Prasanna Mangrulkar, Assistant Curator
Dr. Mrinalini Pathak, Assistant Curator
Manoj Chaudhari, Assistant Curator
Omkar Kadu, Assistant Curator
Bilwa Kulkarni, Assistant Curator
Vaidehi Savnal, Sr. Curatorial Assistant
Divya Pawathinal, Sr. Curatorial Assistant
Dileep Mestry, Conservation Assistant
Prajakta Jadhav, Conservation Assistant
Siddharth Waingankar, Jr.Artist (N.H.Section)
Shobha Kadam, Textile Conservator
Prachee Sathe, Shop & Product Designer
Smita Parte, Jr. Artist
Pratik Aroskar, Exhibition Associate



Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, Mumbai
(formerly Prince of Wales Museum of Western India),
Mumbai Metropolitan Region Heritage Conservation Society

and
Sir. J.J College of Architecture

introduce the third year of

CAPACITY DEVELOPMENT PROGRAMME IN BUILT HERITAGE STUDIES AND CONSERVATION 2015-2016

The objective of this programme is to build capacity on the practical aspects of built heritage conservation. This programme will be conducted by experts from all over the country and will include lectures, workshops and hands on experience on various subjects such as distress diagnostics, material testing, impact of earthquakes, retrofit strategies, structural conservation, lime plasters and mortars preparation, conservation of metals, wood, glass, stone, project management, tendering, monitoring, health and safety, advocacy, legislation, charters and approaches to built heritage conservation

COURSE SCHEDULE WITH TENTATIVE DATES

- MODULE 1 : APPROACHES TO BUILT HERITAGE AND CONSERVATION - AUG 24 - 28, 2015
- MODULE 2 : LIME PLASTER AND STONE CONSERVATION - SEP 21- 25, 2015
- MODULE 3 : CONSERVATION OF TIMBER, METALS, GLASS AND CERAMICS - OCT 12 - 16, 2015
- MODULE 4 : STRUCURAL CONSERVATION, RETROFIT AND MAINTANENCE - DEC 8 - 12, 2015
- MODULE 5 : CONSERVATION PROJECT MANAGEMENT - JAN 18 - 22, 2016
- MODULE 6 : URBAN CONSERVATION AND ENABLING ENVIRONMENT - FEB 29-MARCH 4, 2016



ADMISSIONS OPEN

CERTIFICATION

Participants will be given participation certificates for attending individual modules. A diploma will be jointly awarded by the MMR -HCS, the CSMVS and Sir J.J. College of Architecture to participants who successfully complete all six modules. Diploma applicants have to submit written assignments at the end of each module. They are also required to successfully complete a written examination at the end of all six modules to be eligible for the diploma.

WHO CAN REGISTER ?

Participants enrolling for individual modules may have a Graduate degree in any discipline or practical experience in architectural works. Participants enrolling for the diploma should have a graduate degree, preferably in Architecture or Civil Engineering. Practitioners with relevant work experience may also enroll. All diploma applications will be screened on the basis of educational qualifications and work experience prior to granting admission to the course.

FOR QUERIES & REGISTRATION

Contact:
BHSC Programme Coordinator
Tel: 022-6553122 (10:00AM TO 5:00PM)
Fax: 022- 22045930
Email: coordinatorbhsc@gmail.com
Visit us at: www.bhsc.in

As the seats are limited, a quick booking may be made by dropping an email or calling the office.





Coordinator
Prof. Mustansir Dalvi

MODULE COORDINATORS

MODULE 1: APPROACHES TO BUILT HERITAGE CONSERVATION

Professor of Architecture at Sir J. J. College of Architecture, Mumbai, and the present Chair of the Board of Studies in Architectural Education of the University of Mumbai. He is the former Chairman of the Navi Mumbai Centre of the Indian Institute of Architects.

"Our objective is to acquaint participants to the discipline of conservation - from the macro-environmental to urban conservation, from architectural to structural conservation, to the micro- the conservation of artifacts. We shall orient our participants towards several approaches to conservation (preservation, restoration, revitalization, reuse, retrofitting etc.) related to different types of the built form and its management and introduce them to practical conservation- to the art of execution, to techniques of undertaking documentation of built heritage and to preliminary condition assessment of heritage sites and case studies of the project."



Coordinator
Anupam Sah

MODULE 2 & 3 : MATERIAL CONSERVATION I & II

A heritage conservation-restoration practitioner, educator and strategist, Anupam is the Head of Art Conservation, Research and Training at the CSMVS Museum Art Conservation Centre. He also serves as Director of Anupam Heritage Lab (India) Pvt. Ltd and as Founder Secretary of Himalayan Society for Heritage and Art Conservation

"The course on material conservation gives a clear idea about why and how the various components of a building deteriorate. This information allows the conservation planner to arrive at decisions on how to arrest the deterioration as well as how to avoid the damage in the future. Course participants are introduced to a variety of conservation materials and techniques and this also builds capacity to be able to interact with material conservation professionals on an informed platform"

MODULE 4 : STRUCTURAL CONSERVATION RETROFIT & MAINTENANCE

Assistant Professor of Structural Engineering, IIT Madras. Arun Menon holds a B.Arch. degree from REC, Trichy, an M.Tech. in Civil Engineering and a PhD degree in Earthquake Engineering from University of Pavia, Italy. He coordinates the activities of the MHRD-supported National Centre for Safety of Heritage Structures (NCSHS) at IIT Madras.



Coordinator
Arun Menon

MODULE 5 : CONSERVATION PROJECT MANAGEMENT

A civil engineer with a Masters degree in Planning from the School of Planning and Architecture, New Delhi and an M.A. in Conservation of Historical Buildings, Landscapes, Sites and Gardens from the University of York, U.K. He has been involved in early practical conservation works around the country and conceptualized and implemented over a century of significant projects. He is a practicing Conservation Architect and an educator in the field of Conservation.



Coordinator
Ravindra Gundu Rao

MODULE 6 : URBAN CONSERVATION & ENABLING ENVIRONMENT

Conservation Architect and Executive Director, Urban Design Research Institute (UDRI), he has served on the Mumbai Heritage Conservation Committee of the State Government and is on the Board of Governors of the Heritage Conservation Society of the Mumbai Metropolitan Region Development Authority.



Coordinator
Pankaj Joshi

Participants can join this modular programme at any time through the year, for any one or more modules, depending upon their work schedule. Participants have the freedom to complete the six modules and appear for the diploma exam over a maximum period of two years.

ELIGIBILITY: Participants enrolling for individual modules may have a Graduate degree in any discipline or practical experience in architectural works. Participants enrolling for the diploma should have a graduate degree, preferably in Architecture or Civil Engineering. Practitioners with relevant work experience can also enroll. All diploma applications will be screened on the basis of educational qualifications and work experience prior to granting admission to the course.

FEES: The subsidised fees includes costs of course material, teaching, site visits, evaluation and certification. The fees for each module is Rs. 6000. If a participant joins all six modules, then a concessional fee of Rs. 30,000 will be charged. **Please note that travel, transport, boarding, lodging are not covered by the course fees and expenses for the same, will be borne by the participants.**

EVALUATION & CERTIFICATION: Participants will be given participation certificates for attending individual modules. A diploma will be jointly awarded by the MMR-HCS, the CSMVS and Sir J.J. College of Architecture to participants who successfully complete all six modules. Applicants have to submit written assignments at the end of each module. Diploma applicants are also required to pass a written examination at the end of all six modules to be eligible for the award of the diploma.

HOW TO APPLY: Participants interested in attending one or more modules may send their completed registration form to: Programme Coordinator, Built Heritage Studies and Conservation Cell, CSMVS Museum Art Conservation Centre, Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, 159/161, M.G. Road, Fort, Mumbai- 400023 by post/ courier OR email a scanned copy of the completed registration form to the Programme Coordinator at bhscprogramme@gmail.com. Entire fees (per module) will have to be paid in advance one week before the commencement of the module. The cheque is to be drawn in favour of: Chhatrapati Shivaji Maharaj Vastu Sangrahalaya.

As seats are limited, a quick booking may be done by emailing or calling the programme coordinator.

CONTACT US

Built Heritage Studies and Conservation Cell

Museum Art Conservation Centre,

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya,
159/ 161, M.G. Road, Fort, Mumbai- 400023.

Programme Co-ordinator: coordinatorbhsc@gmail.com

Phone: 022 65563122 Fax: 022-22045430

Email: bhscprogramme@gmail.com Website: www.bhsc.in

Sir J.J. College of Architecture

Professor of Architecture

D.N. Road, Opposite CST Station, Fort, Mumbai- 400001.

Phone: 022 22621649 Website: www.sirjjarchitecture.org

MMR- Heritage Conservation Society

Secretary, MMR - HCS

7th Floor, MMRDA Building, Bandra Kurla Complex, Bandra (E), Mumbai 400051

Phone: 022-26591267 Email: mmrhcs@mmrhcs.org Website: mmrhcs.org.in



Museum Information

Visiting Hours: 10.15 am to 6.00 pm.

The Museum will remain closed on all Mondays between 15th June and 28th September 2015.

The Museum will also remain closed on January 26, May 1, August 15, October 2 and public holidays falling on Mondays

Admission Charges

Category	Museum entry	Mumbai Experience Documentary	Combo
Indian Adult (Above 12 years of age)	₹ 70/-	₹ 40/-	₹ 100/-
Foreign Adult (Above 12 years of age)	₹ 400/-	₹ 50/-	₹ 450/-
Children (5 years to 12 years of age)	₹ 20/-	₹ 20/-	₹ 35/-
Student (through school upto 10 th std)	₹ 20/-	₹ 20/-	₹ 35/-
College Student (with valid ID card)	₹ 35/-	₹ 30/-	₹ 50/-
Senior Citizen (above 60 years)	₹ 50/-	₹ 35/-	₹ 75/-
Defence Personnel	₹ 50/-	₹ 35/-	₹ 75/-
Group (25 and more)	₹ 50/-	₹ 35/-	₹ 75/-

Mumbai Experience Documentary (Duration - 17 min)

Show Timings

11:30 am | 12.00 pm | 1:00 pm | 2:00 pm | 3:00 | 4:00 pm | 5:00

Photography and Video

Photography and video recording is permissible only for non-commercial purposes. Photography passes are available at the ticket counter and information centre. Only hand held equipments without flash and tripod are permitted.

Mobile Camera - ₹ 40/-

Still Camera - ₹ 200/-

Camcorder(Non-professional) - ₹ 1,000/-

Photography for members of the press is free of charge, subject to producing their Press Card.

Audio Guide - ₹ 40/-

For International Visitors, audio guide is complimentary along with the ticket.

Facilities of wheel chair, ramp and elevator available

On Tuesday children and school student (with identity cards) will be admitted free

for Exhibitions, Seminars and Educational Activities



• **Coomaraswamy Hall**
For lectures, seminars, temporary exhibitions and art shows



• **The Museum Shop**
Showcases traditional handicrafts and Museum souvenirs



• **Premchand Roychand Gallery**
For national and international travelling exhibitions



• **Cafeteria**



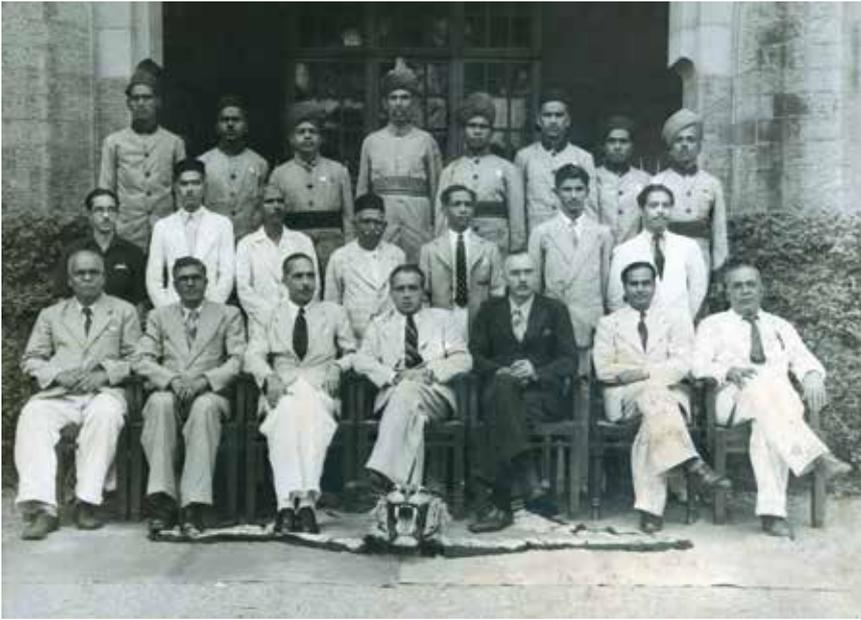
• **Seminar Hall**
For educational activities



• **Curators Gallery**
For temporary exhibitions and to showcase exhibitions conceptualised by curators



• **Visitors Centre**



**The Natural History Section
in its developing years**

Museum Archives, 1930s

THE MUSEUM



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159-161, M. G. Road, Mumbai 400 023, India.

Tel: 022-2284 4484 / 2284 4519, Email: csmvsmumbai@gmail.com | Museum Website: www.csmvs.in

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Editor: Sabyasachi Mukherjee

Editorial team: Manisha Nene | Vandana Prapanna | Ajay Kochle | Anupam Sah

Assistance: Bilwa Kulkarni | Divya Pawathinal | Vaidehi Savnal

Newsletter Design and Layout: Apeksha Ghadigaonkar | Mahesh Poojary

The Museum Newsletter is supported by the Museum Society of Bombay

The Museum Society of Bombay, founded in 1963, is a membership organization, located in the Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (formerly Prince of Wales Museum of Western India) Mumbai. Under its banner a variety of interesting programmes are organized. These include lectures by India and visiting specialists from abroad; seminars and workshop on subjects of cultural and historical interest and guided tours to historical sites within and around Mumbai and group tours to places of interest within India and abroad. Special programmes are also conducted for various categories of children

Email: museumsocietyofbombay63@gmail.com