



PITCHANDIKULAM FOREST
(A Unit under Auroville Foundation)

Pitchandikulam Forest News Letter

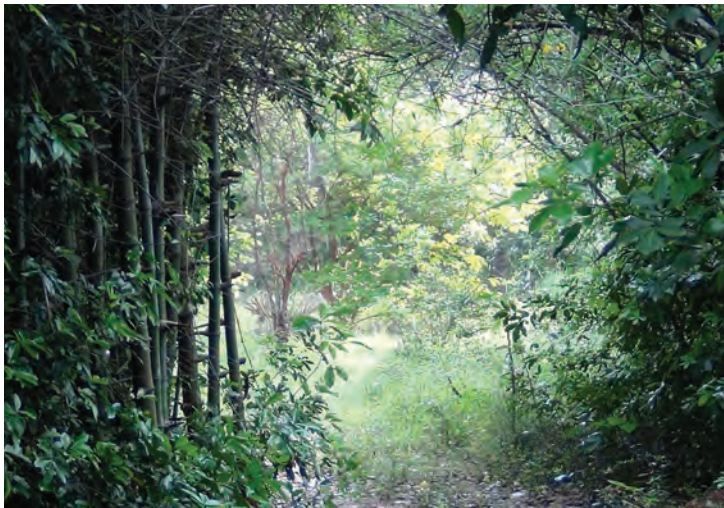
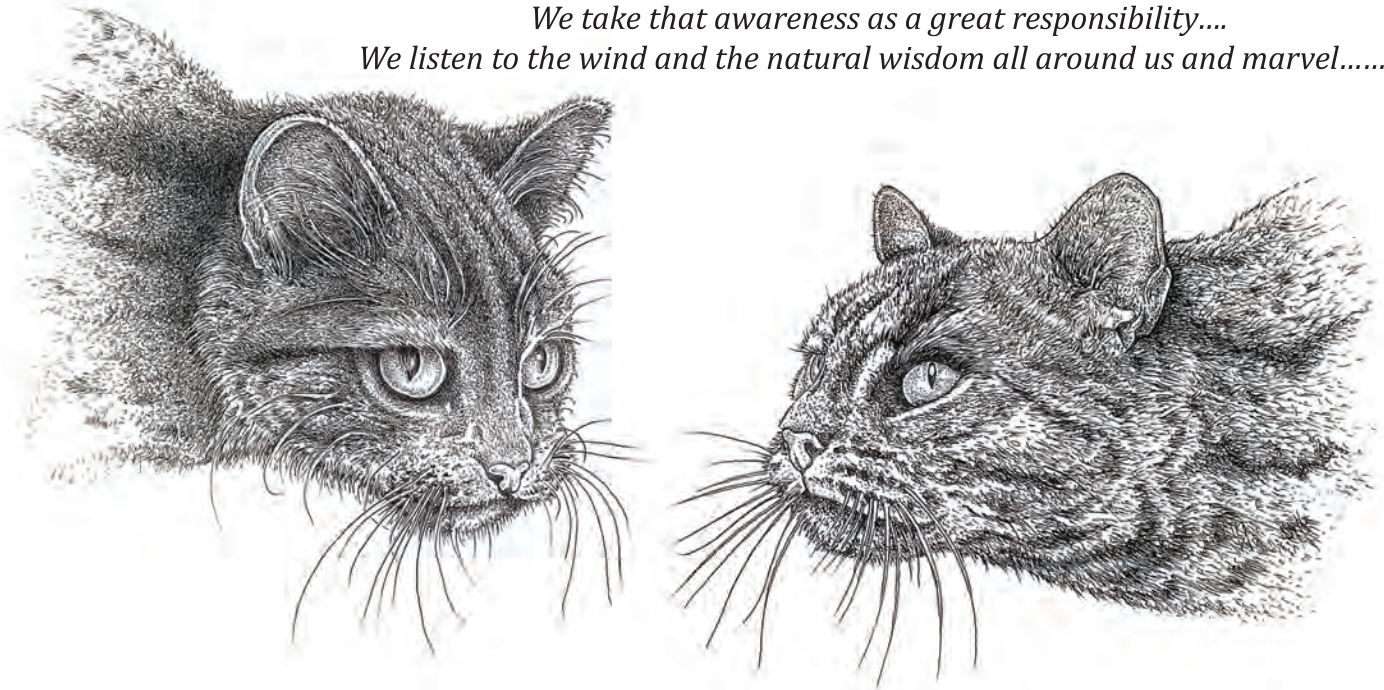
Remembering the future garden and its people

2019/20

In these difficult and challenging times, we sense that the rusty spotted cats and other wild friends still gently appreciate our presence as stewards of this sanctuary...

We take that awareness as a great responsibility....

We listen to the wind and the natural wisdom all around us and marvel.....



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Pitchandikulam Forest is a community based in the green belt of Auroville in coastal Tamil Nadu, South India, focused on restoration ecology where you can find:

- » a seventy-acre forest
- » our social outreach and external consultancy offices
- » a bio-resource education centre
- » classrooms and meeting rooms
- » an art studio
- » a seedling nursery and display seed room
- » a medicinal plant garden
- » a museum of rural Tamil life
- » volunteer accommodation and communal kitchen
- » private housing for the Pitchandikulam community

from the forest

The early morning smells of cow dung, as age old protective patterns unravel in front of doorways.

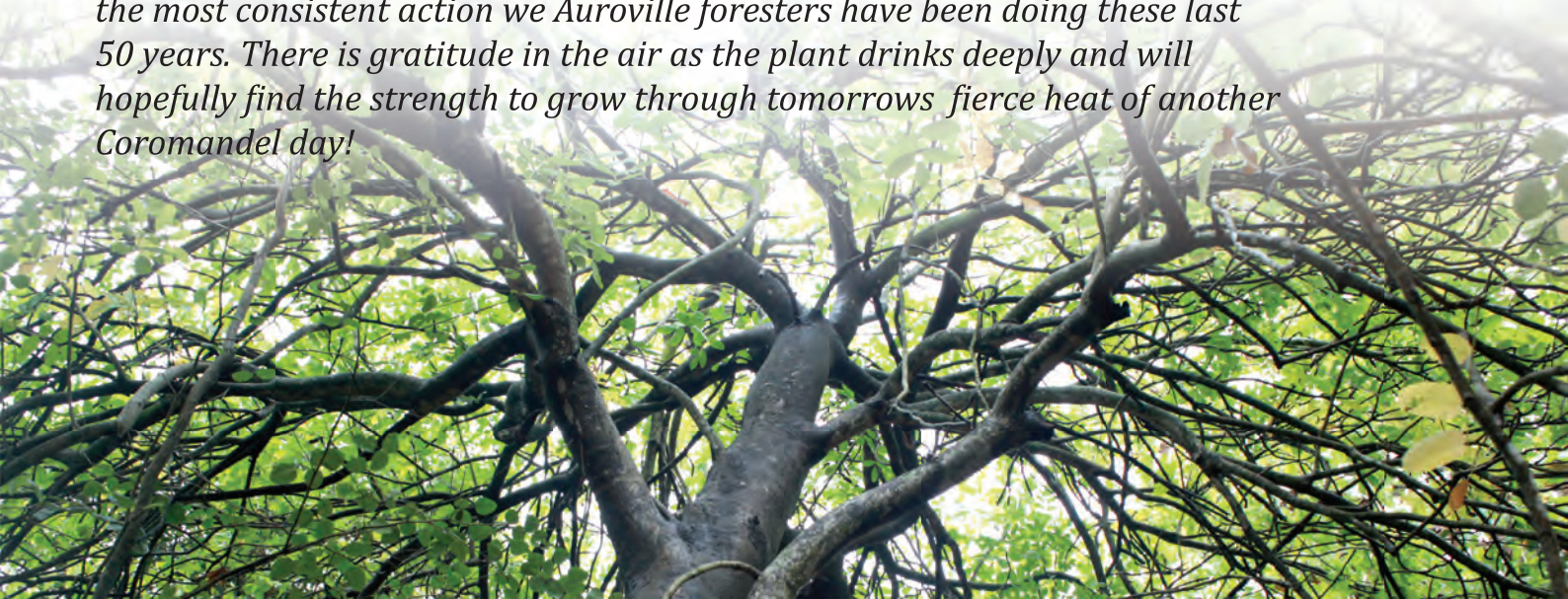
A friend died in the village last night and we can't go to pay our respects. No marriages or coming of age ceremonies. The village pond has been there a thousand years and is always full of fish. The boys, who should be at school, sit on the banks with their fishing lines watching Tamil movies on their cell phones. Jackals, monitor lizards and squirrels are finding their way into cooking pots. Lots of police everywhere keeping us safe ,manning flimsy checkpoints ,searching for signs of freedom ,arresting compassion, confiscating motorbikes and making the owners do sit ups in the middle of the road, it brings out the best in us! Its hot ,its midday and there is not much left to lose when you really think about it ...

In the cool shelter of the forest ,standing with old friends that we planted 47 years ago , feeling them as a community, listening, touching each other gently under my feet, the conversation flowing through tiny filaments of awareness, vegetal heart roots trusting , connecting, symbiosis.

A prickle of porcupines are rooting around in the tree nursery at night, causing mayhem with the freshly seeded bags. We hope to grow 50000 new plants this year. A wild boar has moved into the top forest in the last weeks.

When it's very quiet you can hear the waves crashing on the shore 3 kms away. In spite of the lockdown the fishermen families in the beach villages are out collecting crabs on the shoreline.

It is evening and I walk carefully on the path as the liquid movement of a rat snake formalizes the chaos of the forest floor. It is cool, the end of another day and a good time to be watering young trees in the fading light, perhaps the most consistent action we Auroville foresters have been doing these last 50 years. There is gratitude in the air as the plant drinks deeply and will hopefully find the strength to grow through tomorrows fierce heat of another Coromandel day!



Visions from the beginning of our journey

In these strange times one finds oneself remembering the dreams and visions of 50 years ago. Reading this passage by John Todd invokes the hopes and aspirations that nurtured us to do what we have done.

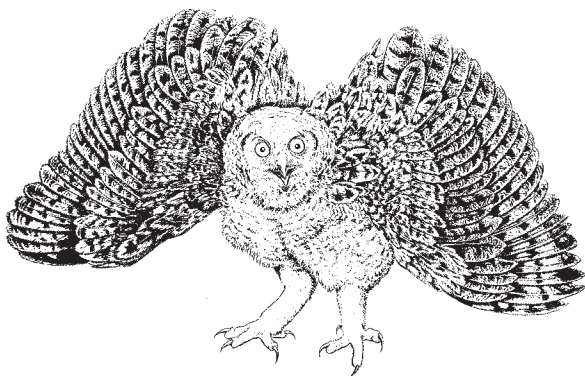
“In the meantime I am slowly assembling the skills to develop “ocean Arks” .They may not be as big as originally conceived ,and in fact their strength ,beauty and usefulness may be enhanced by their numbers rather than by their size. My dream is that within the next few years planetary stewards will be able to travel from Findhorn to Auroville in India ,and Auroville to Chinook Community in the northwest of North America, and on to New Alchemy and Ocean Arks International .I should like the Ocean Arks to be fast and safe and works of great beauty so that stewardship will have workhorses that feed both humanity and the original imagination. They will allow us to gather the collective land tending skills of many cultures and link them together for application. Such gathering and linking will be the work of generations and wonderful stuff too.....”



During the lockdown, Eric, our fauna specialist wrote a monograph

The seed of the idea to publish a photographic guide to the Owls of India was born in September 2019 when Saravanan Janikiraman and I were invited to partake in a photographic exhibition of Owls held at Karnataka Chitrakala Parishad in Bangalore. The result and text and photographs by Saravanan were shared with my friends, some of whom are serious Ornithologists. They found the draft rather rudimentary and suggested that I lead the process that will impact on interested naturalists / wildlife biologists. As soon as I began to take interest, the whole exercise morphed, becoming a budding monograph on the Owls of South Asia and not only India. In the meantime Saravanan began collecting photographs from all his contacts and a trend emerged: first of the kind of photographs of Owl

sub-species, growth patterns, behaviour, etc. All this took the greater part of the latter part of 2019 and beginning of 2020. Then the COVID lockdown was imposed and I couldn't get out of my Home for about two months and I began intensive data mining and writing. Pitchandikulam's network got the Editor of Journal of Threatened Taxa interested in publishing the monograph. The draft manuscript and photographs have been shared with him and once travel is possible in a couple of months we will be able to meet Saravanan (co-author) and the Editor of JoTT and get this over with and done. Another feather in the cap for Auroville Science? Saravanan's work can be accessed at www.ogaclinks.com



Indian Eagle Owl chick in full intimidatory display



Mottled Wood Owl

It is the most recent owl colonizer of Auroville forests and an indicator of the health of the forest since it is dependent upon old growth forest with trees large enough to provide large cavities for the species to nest in – like in Pitchandikulam. Their distinctive calls can be heard at twilight and in the night. I particularly recommend listening to the waking up call and hooping call by Benji Smelt on <https://dibird.com/species/mottled-wood-owl/>



Young Mottled Wood Owl



Young Mottled Wood Owl as Illustrated by Eric

Seeds of life –Pitchandikulam`s nursery



Birds and butterflies dancing and foraging with greenery all around, Pitchandikulam Forest's nursery can be seen bustling with life. Forty seven years ago when it started , the only trees found were neem and palm., in many ways, the nursery embodies the starting point for the seventy-acre forest of Pitchandikulam –

Each year, around 20,000 seedlings are raised to help re-establish the Tropical Dry Evergreen Forest (TDEF) in Tamil Nadu. On an empty land, approximately 500 trees per acre can be planted. With the focus on indigenous species and plants with medicinal purposes, the nursery has more than 250 different species.

7 people are occupied in the nursery taking care of the seedlings. Firstly, the seeds are collected from our own forest or nearby sacred groves, and then sown in trays. When they have grown a few inches tall, they get transplanted into bags filled with soil , and there spend approximately eight months until they are strong and tall enough for plantation during the monsoon season from October to December.

The forest is becoming denser with each passing year as bald spots continue to be planted with more trees,shrubs and climbers. Additionally, many seedlings are distributed to villages of the bioregion and used in large reforestation projects in different parts of Tamil Nadu.



Environmental Leadership and skill development program for Rural Women (DAP)



This project has been funded by the Australian government to Pitchandikulam, for the development and implementation of an environmental leadership and capacity building training program for 350 women from five districts of Tamil Nadu. It provides a unique, innovative pathway to place rural women as leaders in their community and to take positive actions towards climate change and resource management. The training is conducted under 5 different themes — herbs for health, ethno veterinary practices, beauty and wellness, herbal food and drink, and sustainable entrepreneurship.



As a result of this program, we hope to have supported and trained rural women as Master Trainers, who can in turn guide other women in becoming community environmental leaders, and innovators in the setting up of sustainable micro-enterprises. Through this, training also becomes an income generation avenue which can continue long after this program. The trainers would be capable of organizing workshops in different districts across the state, for groups that are seeking Environmental awareness expertise. The program is developed in a way that it will lead to conservation of bio resources and associated traditional knowledge.



Community Register at Kollumedu Village



Community register is a village level documentation which aims at collecting information on the rich traditional knowledge, background information, village history, water management, health, the use of bio-resources and their availability etc.

Why Community Register?

To revitalise traditional food, health, agriculture, arts, crafts and several other applications of bio resources for long term sustainable development of the community.

To protect traditional rights of these community to use these bio-resource

To set priorities for conserving those resources, which are under threat

To create awareness about the importance and education and health

To share the local knowledge of bio-resource for mutual benefit with other communities

To protect the local knowledge from exploitation by commercial users

Kollumedu is a remote village located near the Kurumpuram Reserve Forest, Marakanam. The reserve forest was created in 1960 and covers an area of 240 acres a mixture of scrub jungle and Tropical dry evergreen forest.

The Pitchandikulam team first conducted a Rapid Rural Appraisal (RRA) at Kollumedu about 20 years ago. During a health survey and a health camp

in 2019 at Kollumedu, the idea for an updated RRA arose. A 'Community Register' survey was conducted in January 2020. With the approval of the village elders council, a diverse demographic group of the village residents were interviewed comprising of children, youth, women, tribal and artisan community representatives.

The Irula tribes are residing adjacent to the forest and the village. The Irulas are one of the India's oldest indigenous tribes and it is they who have ancient and intimate knowledge about snakes. The small river that runs through the village is the place which brings all the people together despite of the different communities. The river is a platform where fishermen fish, Irulas take bath, naidus and other communities come to wash their clothes and take a swim.



Therukkuttu performance Traditional Tamil art form meets MeDi Clowning



Therukkuttu is a traditional Tamil street theatre which is a form of entertainment, a ritual and a medium of social instructions. The performers wear costumes and make up representing deities and the performance is supported by musicians who play instruments like the harmonium and drums.

As part of two day training in Nadukuppam, four students of MeDiClown Academy learned the basics of Therukkuttu performance. At the end of the training the students put up a performance for the people in the village.

MeDiClown Academy is a registered activity under the Auroville foundation and offers a six months training of the arts and science of medical clowning. MeDiClown Academy creates heart-to-heart connections and aims to transform health and social well-being for a happier India. Part of the MeDi Clown training is the learning about traditional art forms like therukkuttu.

The possibilities of how to use the art of play and storytelling are numerous. In the MeDiClown context it can also be used in health care facilities for stress relief. Therefore, it is not only for entertainment, but also can be used for other purposes. Pitchandikulam has used it before in many different settings like schools or ecofestivals to create awareness of the watershed, plastic

pollution, protection of the forest and climate change. Practising Therukkuttu keeps the tradition alive and can be reinvented in forms to meet contemporary needs like ecological education. In future, MediClown Academy wants to collaborate more with Pitchandikulam to promote various traditional art forms, like leather shadow puppets and villupattu which is a practice of story telling through music.



The year in retrospect: Short reflections from the Adyar EEP team



2019 -20 was a busy, eventful year - full of exciting classes, curious children and new directions.

The year began for the new batch of Year 1 students with orientation walks in the Adyar Park. (insert numbers here if possible) During these walks we tried to infuse these groups with a sense of love and curiosity while leisurely rambling through the park - and absorbing details about restoration, ecology and their place in it.

The 6th grade went through the 1st year syllabus - beginning with an introduction to forests and following it with classes on insects, reptiles and birds - as well as the field sessions associated with them - to Guindy National Park and Snake Park

The children in their 2nd year of environmental education began the year with - The Story of Life - a recap of evolution, its milestones, the events that caused life on earth to be in the state it is now.

The fossil class which came after this delved deeper into visible reminders of evolution, we touched on the process of fossil formation, types of fossils, the process of fossil excavation and Indian fossil sites.

The year progressed with heavier topics like Industrialisation, Solid waste Management, Pollution and lastly Climate Change. Keeping in

mind the necessity for inspiring action instead of sinking into despondency - the methodology followed was primarily activity based.

We were very happy to share the progress of our work on the Siruseri lake restoration with the students which is a living example of how the scale of these water bodies and immense work of restoration have the ability to help prevent floods or droughts in vulnerable areas.



The Ecology of Madras through the eyes of children (Eco- Fest 2020)



The Eco-Fest 2020 organised by the Chennai Environment Education Team, Pitchandikulam Forest, in association with the Alqamar academy and The Gurukulam Trust school and the Vidyaniketan Matriculation school, took place on the 7th of March at Vidyaniketan school.

The fest was centred around the local Ecology of Madras, showcasing models, games and artistic renditions like shadow puppetry and street play. The fest was specially designed for the people of Madras to enjoy and be aware of their environment.

The fest started off with a time to display exhibits, these exhibits were the result of the children's learning with the team for the past two years. Some of the exhibits were water conservation methods in Tamil Nadu, The Tropical Dry Evergreen Forests of South India, Reptiles of south India, Climate Change: Specific to Ennore. There were theme

based games such as "The polluter shootout": identifying the sector which contributes to the most emissions, "The kuppai wheel":guessing the decomposition time of the objects we use daily.

Finally the entire congregation gathered together to witness the theatrical renditions of the children, with the Gurukulam school performing Shadow puppetry performance on climate change and its effects on our oceans and the children and educators of the Nadukuppam school putting up a professional level therukoothu performance on the adyar watershed.

The fest was a celebration of our children, the forests, the water bodies, the birds and the people that make Chennai, Chennai..... Majority who attended left with a feeling of being a small part of this big urban, thriving ecosystem.



PITCHANDIKULAM'S ENVIRONMENTAL EDUCATION PROGRAM... THE WAY FORWARD

In amongst the remnants of an education system that was not really working very well anyway, we have compiled our knowledge and experiences into manuals, developed lesson plans and taught online classes . As travel and trust open to possibly sweeter futures, Pitchandikulam is mentoring/training a group of potential Environmental Educators who will be teaching in some 15 schools in the new year. We feel we are navigating a way out of the dangerous shoals, reefs, and whirlpools of 2020, working with positive young energy that yearns for calmer waters ...



Breeding of a painted stork in the urban wetland ecosystem of Adyar Eco Park



The painted stork is distinguished by its rose-pink feathers found near its tail. It is a flagship of its endangered habitat especially wetlands. Painted

stork (*Mycteria leucocephala*) although one of the most abundant of the Asian storks is listed as Near Threatened (NT) in IUCN. Because it is undergoing a rapid population decline due to wetland drainage, pollution and shrinking of water bodies.



Two nests were noticed on a *Terminalia arjuna* tree at a height of 5 mts. One nest with 2 chicks was sighted on 26th February 2020. This is the first authentic record from Adyar Eco Park after the ecological restoration process started. Almost after a decade we could witness the few rare birds are utilizing the habitats.



Ancient inscriptions relating to water bodies found in the Kazhuveli Bioregion



There are many stone inscriptions found in the Kazhuveli bioregion. The inscriptions are mainly found at temples and Eries (Lakes). These inscriptions belong to the period of Chola and Vijaya Nagar emperors. The Chola inscriptions gives information about digging wells, the rejuvenation of Eris and maintenance work.

Eries is a local resource developed by our ancestors which realizes the importance of conserving water. Traditionally Eries have played several roles:

- 1) As appropriate support for the cultivation of food crops.
- 2) It acts as natural flood controller, thus preventing soil erosion and wastage of run off waters during periods of heavy rainfall.
- 3) As storage device which acted as insurance against low rainfall and also recharge of ground

water in the surrounding areas.

- 4) As a device which is crucial to the overall ecosystem.

It was considered an act of great merit for an individual to construct and maintain works of irrigation. Several inscriptions give a picture of how Eries were constructed, maintained and how the water was managed in the ancient times. Inscription evidence shows that grant of land called Maniyam, held rent free in hereditary and perpetual occupation, were made for the purpose of irrigation. Pitchandikulam's effort in conservation of water and water retention landscape is not a new concept. Our bioregion is filled with artificial water tanks with a cascading flow of water which was built in the ancient times. Pitchandikulam is doing water retention landscapes at a small level at Nadukuppam and at a bigger level in Siruseri.



Water Retention Landscapes



“One of the focuses of our ecological work is creating Water Retention Landscapes as high as possible in the catchment. By creating forests at the top of the slope, the vegetation above and below ground creates a sponge effect to absorb the rainwater and release it slowly into the land further down the slope.

Water retention landscapes are models for natural water management, a basis for reforestation and agriculture in regions threatened by poor water conditions. The basic principle is that no rainwater should run off, but rather infiltrate into the soil where it falls.

Our 35acre forest farm in Nadukuppam was a barren land 15 years ago. It was an eroded wasteland which had no vegetation. The natural topsoil had disappeared, which is why the earth

body lost the ability to absorb the rainwater.

We observed the land and understood the flow of water during many monsoons and created a series of interconnected retention areas in which the rainwater is collected. The ponds themselves are not sealed with concrete or any artificial membrane, so that the water can slowly diffuse into the ground to recharge the aquifers. We plant the Coromandel coastal species of trees, herbs, and grasses to stabilize the edges of the water bodies.

When restoring and creating water retention landscapes we take the first indispensable step towards healing ecosystems and laying the foundations for self-sufficient communities.



Restoration of the twin lakes, Siruseri Chennai



The year 2015 was a time of reckoning for the coastal region of Tamil Nadu. On December 1st the region experienced the highest amount of rainfall in 100 years where over 400 people died, nearly 2 million people were displaced and losses amounting to 300 crores were incurred. There was serious need to take stock of situation and carry out immediate measures. TCS, Indian Institute technology of Madras and Pitchandikulam forest consultant got together to do the needful towards the positive rejuvenation of the environment.

The Siruseri water catchment area of which SIPCOT campus is located was identified as critical to the flooding of southern Chennai. A detailed hydrogeology survey of this area was carried out by IIT Madras. It came up with valuable recommendations to be implemented in the Siruseri water catchment to prevent future floods and to improve water management in the region.

This was to be executed in 2 phases; first the encroachment would be removed, and drainage channels cleared, secondly the storage capacity of the Siruseri twin lakes would be improved. IIT also recommended an eco-park and knowledge center in the area. This would help in sharing the experiences and lessons learned from the desilting and restoring the lake and channel systems. Such a center also enables demonstration of sustainable practices and would encourage an environmental planning conversation to happen between all the local stake holders.

PFC's holistic vision included ecological and social factors. It puts together a replicable model of eco restoration that included in the age old system of 100's of cascading lakes to west of Chennai. This would reduce the impact of flooding and also recharge the aquifers so that Chennai could have sufficient water in the summer months.

The plan included the transformation into a vibrant eco system of the degraded reserve forests above the Periya eri and Sitheri, which are infested with invasive exotic tree species. The forest area which is heavily eroded needs to be restored by the creation of water retention landscapes.

Awareness programs were conducted among the locals to gather their visions for Siruseri.





The conceptual plan of PFC also included provision for bunds, hills, platforms, islands and a site for the eco knowledge center.

The land development work of the Periya eri began on 17 December of 2018. In Sitheri the land formation work reached completion before the rains of 2019. More than 6,000 trees and shrubs of 60 indigenous species were planted during the last months of 2019. After over 35,000 machinery hours over 12,500 man hours and countless hours of design and creativity the twin lakes began to breathe again.

It feels positive that green blue energy is returning to an area that some 17 years ago was rural farm land but which was then transformed into an urban and industrial landscape. Hopefully with enlightened direction, SIPCOT and its surrounds can be a green model of how technological parks can be created.



A male Spotted Deer or Chital visited the twin lakes a few months ago



A male Spotted Deer or Chital (females don't have antlers) was spotted at Siruseri enjoying a swim in the lake that Pitchandikulam restored last year.

The Chital is an extremely shy animal and spotting it is a rare occurrence. It is found almost all over India except for some parts in the extreme North. They

travel in group ranging from anywhere between 10-50 animals. A few stags normally accompany a considerably large number of females. While they are not in any way an endangered species, they are being hunted in larger numbers and are losing their habitat due to increase in human demand for agricultural and residential land.

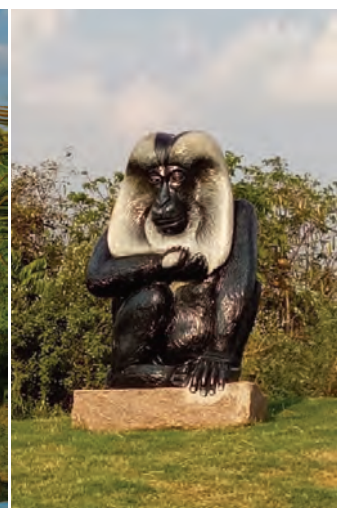


The Toyota Kirloskar Motors (TKM) project, Bangalore



TKM has a very impressive factory laid out over 500 acres at Bidadi industrial area along the Bangalore – Mysore Highway. Here 25 acres has been set aside as an ECOZONE principally to sensitize employees of TKM and other corporates in Bidadi, their families and children from surrounding schools about environmental and conservation issues. PFC

was contracted to execute the Artwork for the site which involved interpretation signage, carving and painting gigantic pillars for a timeline walk, 3D carvings of keystone animal species, 2D carving on boulders depicting endangered plant species and artistically designed mosaic seating. This venture has been very rewarding, and it was a pleasure to be appreciated by the top executives and CEOs of Toyota, many of whom had flown down from Japan to attend the opening ceremony of the park.



Matrikunj



During these recent times of Lock up/down and back to front we were invited to create a masterplan for an Ecopark/Nature lab and teaching space for practitioners of Restoration Ecology on a beautiful piece of land near the Ousteri lake on land relating to the Sri Aurobindo Ashram .It is envisaged that it will serve many schools in the Pondicherry area .In the last months we have shaped the land into channels and lakes and now we begin to plant thousands pf indigenous plants....

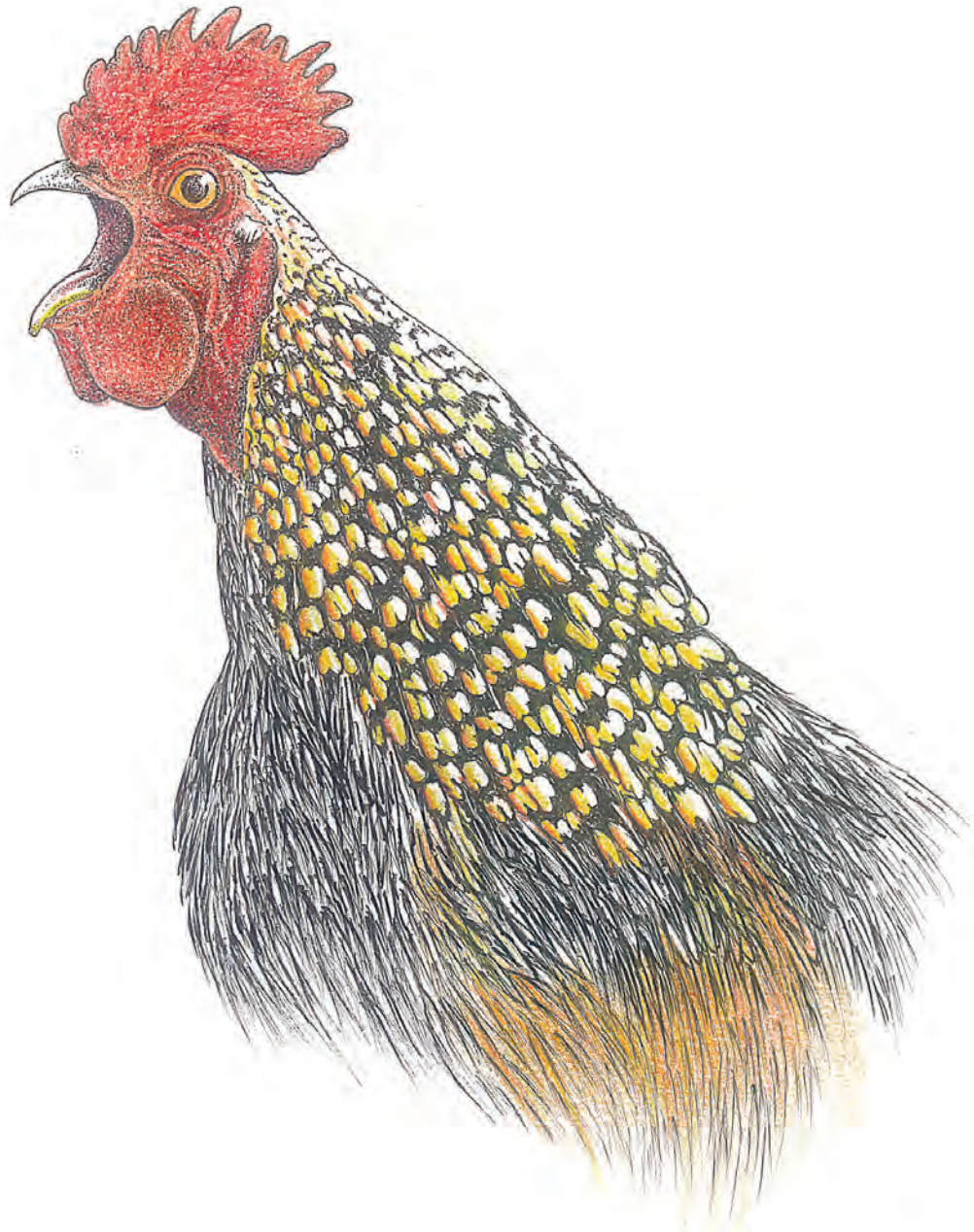
As we evolved this project the thoughts and guidelines that moulded our design were somewhat expressed in the following text.....

“In these extraordinary times can we invoke something different! We need to look between the lines and spaces of all known traditional

dictums, curriculums, and schools of thought. Can we invoke a conversation in a garden on the Coromandel coast, weaving the threads of a deep spiritual, cultural and natural heritage into a garment to wear into the future where balance, biodiversity, harmony and happiness are the new norms? There is a lot of work to do that is for sure, having travelled this path in “Their

Light’ for so many years, it seems that there is no better place than in a garden to create a laboratory, a place where the energies of humans and the natural world can combine to co-exist and co-create a space of deep learning and awareness. We need forums to talk these truths, thinking like clean rivers, feeling the flow and blowing like sweet wind. We need to recognize the reality of a world singing and dancing its way into the future. We need places where we can listen in stillness and celebrate that we are alive and that our song can go on singing. Let Matrikunj be such a place!”





We would like to thank all our friends and well-wishers for their support while we faced the challenges and the joys of 2019 and 2020.

- Pitchandikulam Forest Team