

# KAANAGAM

THE OFFICIAL NEWSLETTER OF ANAMALAI TIGER RESERVE

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**JACKFRUIT**

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FIELD DIRECTOR'S  
DESK**

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# FROM THE FIELD DIRECTOR'S DESK

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The theme of the **"World Environment Day 2022"** is **'Only one Earth'** with main focus on living sustainability in harmony with nature. It was a great pleasure to shift the Tiger cub from Manambolly Range to the nature enclosure created deep inside the forest on 5<sup>th</sup> June. Eight months before, the cub was weak, starving and loitering alone among the tea bushes of Thaimudi Estate at Valparai. The mother was not found nearby. Our staff noticed that it was injured and we decided to capture it and took it to the animal rescue center at Rottikadai. There were deep wounds in the leg caused by porcupine quills, which were dressed, sutured and treated with great care by the forest veterinary doctor. When meat was offered it ate readily and understood that we were only helping it. Ever since, the Tiger cub was maintained under the watchful eyes of the Forest Range Officer, Manikandan and the Anti-Poaching Watcher D.Kumar round the clock. During the last 7 months, it gained considerable weight and regained the strength.



## **RAMA SUBRAMANIAN I.F.S.**

As instructed by the PCCF & CWLW the Tiger cub would be maintained here till it attains two years, and able to hunt the wild prey on its own. Then it will be released into the wild as advised by the National Tiger Conservation Authority. Anamalai Tiger Reserve is not only committed to protect the ecological integrity of the landscape but also to take care of the denizens of the forest. Every effort would be made to make their life in harmony with nature.



## FIREFLIES CONGREGATION

Pravin Shanmughanandam

A treasure house of bio-diversity, the dense forests that lie deep in the protected domains of Anamalai Tiger Reserve is home to a spectacular array of wild species and hosts a broad variety of pristine ecosystems. It's environs and landscape are truly meditative and awe-inspiring by day. But after dark, during those special few days in a year, these ancient jungles truly transform into a gorgeous, glowing wonderland.



Like fairy Christmas lights gently floating in midair, a giant swarm of fireflies, millions and millions in numbers, emitting a trance-inducing, yellowish green light, decorate the dark forest scape staging a mesmerizing, jaw-dropping spectacle.

Deep in the night, our team of photographers and forest officials, lead by DFO, M.G. Ganesan, were treated to this stunning light-show where a whole deciduous forest scape, lit up at once-plunging into darkness, then lighting up all again – in near-perfect synchrony.

It was truly a stunning sight to behold: these fireflies transformed into lightning bugs of sorts, flashing with a distinct rhythm: a few quick bursts of light followed by a several-second pause, then more bursts. In person, the display looked like wave after wave of sparkling greenish yellow flashes, undulating



through the dark forest to put on nature's most incredible light show. Returning from the field, we pondered, "how do millions and millions of these fireflies that are spread over about 8,000 hectares among the protected forest, co-ordinate with each other". Then, we stumbled upon researches that suggested, the synchronous fireflies align in sync by slightly adjusting the timing of their light cycles based on nearby flashes exhibited by fellow fireflies.

As for these fireflies, the synchronisation occurs during their mating season. It's been observed that these fireflies typically don't flash when it rains, and on misty, drippy evenings the intensity of their display diminishes and is restricted beneath the forest canopy. Cool temperatures also shut down the display for the night.

#### Need for Conservation:

Apart from climate change, increasing pressure on the landscape, change of land

use, frequent usage of land in protected areas also pose threat to these populations and may wipe out such congregations if not strictly regulated. Walking, driving through these protected forests can kill females and compact the earth, where the fireflies live as larvae for many months feeding on soft-bodied animals like worms and snails before taking wings as adults. The Anamalai hills, one of the last strongholds for fireflies in the whole world, now also identified as a region that stages an extremely rare celestial wonder, should be protected for our future generations at all costs.

*"After all, Pandora seems real. At least, for a few days in a year, these glowing forests that lie deep in the Anamalai Tiger Reserve, transform into a dazzling bioluminescent forest glittering in mystery and magic."*



In the remote rainforests of the Western Ghats lives one of the most rare and unique of primates – the lion tailed macaque. With a furless black face, expressive eyes, and a thick, shiny coat of black fur, this macaque gets its name from the mane of silver and grey that surrounds it's face and tail that ends in a tuft like that of a lion's.

Considered by scientists as the only truly arboreal macaque on Earth, these elusive creatures usually occupy the tallest, shadowy rainforest canopies far from human sight. While manoeuvring through the canopy, these macaques carefully choose the branches to climb, avoiding perilous ones, and display skills that are sheer acrobatics. A diurnal species, the lion tailed macaque devote their time to searching for fruits and invertebrates, and occasionally socialise with members of their troop by grooming each other to keep their coats free of ecto-parasites and maintain the health of their pelage. Lion-tailed macaques live in troops that usually consist of about 19-25 individuals, with only one adult male.

Being non-human primates, they exhibit a behavioural repertoire similar to human beings. Despite being one of the smallest species of macaques, an adult male when threatened, with canines bared, fur standing on end and tail erect, is a rather formidable creature to behold.

## SPECIES OF THE MONTH

### *Lion-tailed Macaque*



PHOTOGRAPHED BY: DHANU PARAN

The manner in which the mothers look after their infants with scrupulous care, and the playful wrestling that the young members of the troop indulge in are some of the interesting behaviours to observe.

A glorious symbol of the diverse, rich rainforests of the Anamalais, the lion-tailed macaque's complex social lifestyle and the various behavioural similarities they share with humans have found a special place for them in our literature, mythology, art and culture.

**Threats:**

Today, due to the extensive selective logging of our once contiguous rainforests that were cleared to pave way for tea plantations and human encroachments, these macaques have been reduced to just eight sub-populations

spread across the forest fragments of the southern Western Ghats, making it one of the many endangered primates in the world. One such forest fragment is the Puthuthottam forest that neighbours the town of Valparai.

Being restricted in a forest fragment surrounded by human settlements, these individuals face a potential lack of food availability and the threat of vehicular traffic on the road which cuts right through the Puthuthottam forest. With such interactions come added perils like being fed by tourists and being killed by passing vehicles, the biggest threats to the macaques of Puthuthottam apart from forest degradation. Once fed by humans, there is little that can distract a hungry macaque, be it a two-wheeler zooming by, or



PHOTOGRAPHED BY: VARUN ADITYA

even a lorry running at top-speed. Barring the physical danger that macaques face from being fed by humans, such food materials may also be detrimental to their health in the long run.

**Conservation:**

The forest dept. along with Nature Conservation Foundation (NCF), have taken some measures to protect the macaque

colonies of Puthuthottam, by conducting studies to aid in conservation and employing local residents to direct traffic around Valparai when macaques approach roads, and have built ropeways connecting the forest canopy for the macaques to cross without having to negotiate the road where they run the risk of getting hit by passing vehicles.



PHOTOGRAPHED BY: VARUN ADITYA



PHOTOGRAPHED BY: DHANU PARAN

*The evergreen forests in the Anamalai Hills have no shortage of fruiting trees and a whole army of frugivores— animals that consume a lot of fruit in their diet— that feast on them. These frugivores sometimes visit specific trees during the fruiting season for a choice selection of the ripest of fruits. I once heard of an elephant that made repeated visits to a single breadfruit tree to have its fill of breadfruit. And this is what one researcher says on the subject of elephants and mangoes:*

“A fondness for the large fruit of wild mangoes is widely reported. Mangoes are picked up from the ground with the trunk, but elephants will also knock down small trees or shake larger ones to obtain ripe fruit.” There is another strong, sweet-smelling fruit that lures animals and humans alike: the jackfruit, *Artocarpus heterophyllus* and its wild cousin, *Artocarpus hirsutus*. This large evergreen tree is native to India, growing in tropical and sub-tropical forests. Its fruits are large, growing up to 35 kilos in weight, with multiple seeds, each covered by fleshy, fibrous pulp. The heavy fruits hang from the trunk of the tree or from its main branches, connected to the tree by a thick, almost placental stalk.

A long guest-list of mammals come to dine at the jackfruit trees during its fruiting season between February and August: elephants, squirrels, sambar, barking deer, macaques, wild pigs, mouse deer to name a few.

During the day, lion-tailed macaques sit high up in the tree and tear the fruits open in an almost carnal act of savagery and have their feast.

*Jack of  
all Fruits!*

At night, a different host of creatures visit the tree: scurrying rodents that safely hoard the seeds in different burrows to eat later, civets that sometimes eat the fruit whole, seed and all; flying squirrels and fruit bats.

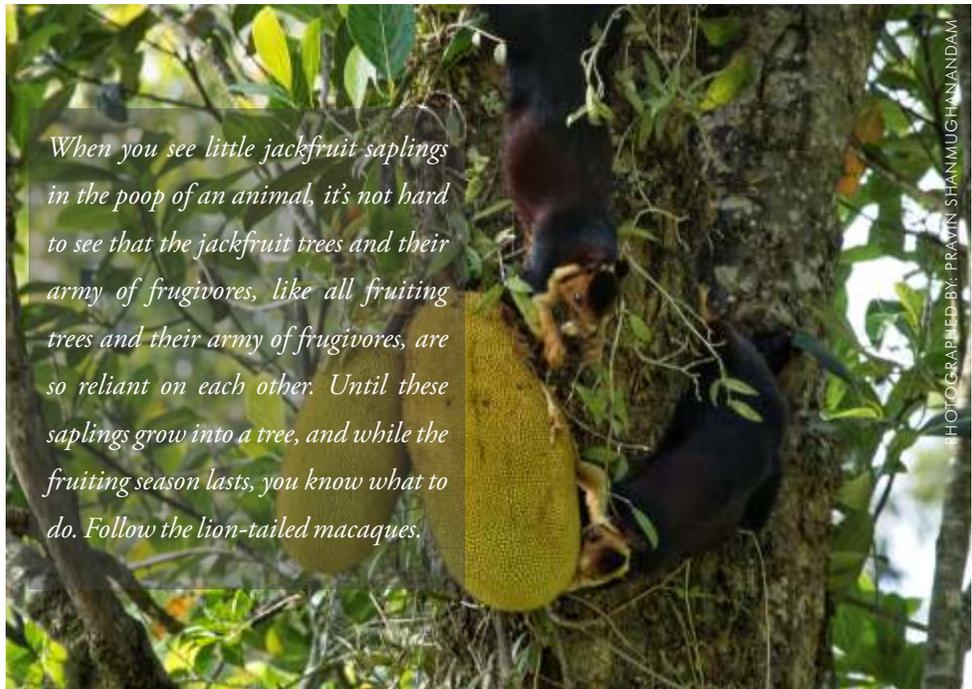
Like the elephant and the breadfruit, I've heard another story of an elephant and a jackfruit tree in a settlement in Valparai. The locals say the elephant is a faithful visitor to the tree every year during the fruiting season. Unfailingly, they would see the same elephant at the same jackfruit tree, where it would have its fill and then lumber away.

Also, two species of macaques have a particular fondness for the fruit: the lion-tailed macaque (LTM) and bonnet macaque.

The bonnet macaques often follow the LTMs to fruiting jackfruit trees. If you expected

frequent tussles to break out between them you would be wrong; the lion-tailed and bonnet macaques feed at different heights of the tree or on different trees to avoid direct contact with each other. You could spend an absorbing hour watching the macaques feeding: they eat messily using both their hands and their mouth or stuff many fruits in their cheek pouches to eat later. Afterward, they spend time licking their fingers to clean the sticky sweet juices of the jackfruit.

The macaques often drop fruits while they eat them which are then eaten by the sambar, barking deer and even tortoises. Fallen, discarded fruits that rot and ferment on the ground begin to release aromatic odors that attract butterflies like common Nawab and the Danaid eggfly.



*When you see little jackfruit saplings in the poop of an animal, it's not hard to see that the jackfruit trees and their army of frugivores, like all fruiting trees and their army of frugivores, are so reliant on each other. Until these saplings grow into a tree, and while the fruiting season lasts, you know what to do. Follow the lion-tailed macaques.*

## STAFF OF THE MONTH



The Anamalai wildlife sanctuary was declared as the tiger reserve in the year 2007 and with an area of 958 sq.km. Anamalai Tiger Reserve (ATR) is located on the southern side of the South Western Ghats landscape. The reserve hosts 6 elephant corridors and many sub branches within it. Apart from the identified routes, about 200 sq.km of private tea and coffee estates also form part of the corridor.

### STAFF OF THE MONTH

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*Anti – depredation squad,  
Valparai and Manomboly*

This results in a lot of human-elephant interface and the incidents peak during the migration period from August to February. Hence, to mitigate such conflicts and prevent human / wildlife casualties, the forest department decided to form a dedicated Anti-Depredation team that operates out of Valparai, Manamboly and Pollachi ranges. Parts of Udumalpet and Amaravathi range also engages ADS personnel during the period. Termed as “Forest Ghurkhas” in common language, they act as a mobile unit in Valparai plateau to assess conflict zones, monitor elephant presence, identify problematic and red zone areas etc. They mobilize themselves based on ground situation and information collected from the local public and estate staff.

The ADS team is active especially during night hours since the wild life movements require keen monitoring during the after-dark hours. There team is equipped with 6 patrolling vehicles armed with all necessary equipments and tools required to manage and prevent human-animal conflicts.

The team regularly engages in spraying Bio-repellents in red-zone areas, especially around labour colonies, ration shops, cooking sheds, primary schools and anganwadis. The elephant herds are also aerially monitored using drones and are later mapped and classified across reserve forests, villages along the fringes, tea estates, swamp areas. The team also creates awareness by distributing pamphlets and mike announcements to prevent conflict and share mobile numbers to stay connected to local public who alert the staff when they observe movements of wild animals and elephants. This year, the ADS team was strengthened and operations were streamlined and as a result, this year reported zero human death.



It is due to the dedicated efforts of the ADS team, this is only the second time in two decades, the Pollachi division in ATR has reported zero human casualties over a period of 12 months due to elephants. Hence, to honor their efforts and hardwork, we recognise the Anti-depredation Squad as "STAFF OF THE MONTH"



## PROJECT OF THE MONTH



The Anamalai Wildlife Sanctuary was declared as a tiger reserve in the year 2007 and with an area of 958 sq.km., it comprises of three divisions namely- Pollachi, Tirupur and Coimbatore. The Pollachi division is further classified into four ranges namely - Pollachi, Ulandy, Valparai and Manambolly.

Periodical Census is essential to ascertain the population-status of species in an area. In ATR, the frontline field staff regularly patrol their range under the keen supervision and guidelines of senior officials. They almost cover as much as 10 k.m. per day. A census may not be confined to mere sampling but it includes information on both the main species as well as the related species. It is ensured, that ecological-factors are included as well. Phase- I of the monitoring census is conducted twice in a year. Census is conducted either by direct or indirect counting methods.

### PROJECT OF THE MONTH

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### *Pre-monsoon Census*

#### Pre-Monsoon census:

The Pre – Monsoon census started in the Pollachi forest division of ATR on 24<sup>th</sup> May to 31<sup>st</sup> May, 2022. The census covered at the beat level consisted of 62 transect lines and took eight days to complete. On the first day, census oriented classes were conducted to the participating staff.

The following instructions were given as guidelines:

- An ecological app should be installed by the patrolling team.
- Each patrolling team shall be equipped with a GPS unit and a digital camera besides the regular equipment.
- The date, time and GPS co-ordinates of the start point should be recorded and written down every 30 mins or at major deviations from a straight line path.
- The total number of staff participating in the patrol should be recorded. A record of all illegal activities should be entered in the data sheet along with time, date and co-ordinate stamp. A photograph is also taken of the site with a time-date stamp.
- Any record of signs and sightings of highly-endangered species while on patrol should also be maintained by

entering the GPS coordinate, date and time of the sighting as well as a digital picture of the same if possible.

- At the end of the patrol, the GPS track log is either downloaded onto a computer in MSTRIPES program or the datasheet with the range-wise information should be deposited at the division office.

The next three days consisted of block count and the remaining three days, transect line census was taken. On the final day of the census, the recorded information and data was submitted for compilation. This involved the beat-wise collection of data in standardized formats relating to tiger and other carnivores, ungulate encounter rates, habitat status, human presence, pellet and dung counts. Based on such data, beat level maps indicating the spatial presence,



relative abundance of prey and predators species are prepared in the GIS domain for record. This 8-day pre-monsoon census aimed at generating valid estimates of population density and population size of tigers and important prey species in the Pollachi division of ATR, and the compiled data is as below:

Population Estimation during the Pre monsoon census period May 24 <sup>th</sup> to May 31 <sup>st</sup> 2022 Anamalai Tiger Reserve, Pollachi Division.		
S. No	Species Name	Population Estimation
1	Tiger	17
2	Leopard	52
3	Elephant	288
4	Sambar	1944
5	Indian Gaur	2497
6	Lion Tailed Macaque	376
7	Nilgiri Tahr	518
8	Spotted Deer	363
9	Sloth Bear	53
10	Barking Deer	29



## SOCIAL INITIATIVE



The Anamalais landscape is worthy to be designated as an 'Anthropological Reserve' as it hosts five different indigenous tribes namely Malasars, Malaimalasars, Kadars, Pulayars and Muthuvars. This makes it a very unique landscape and probably the only tiger reserve with diverse group of indigenous people.

### SOCIAL INITIATIVE

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*E-vehicle for tribal  
children's education*

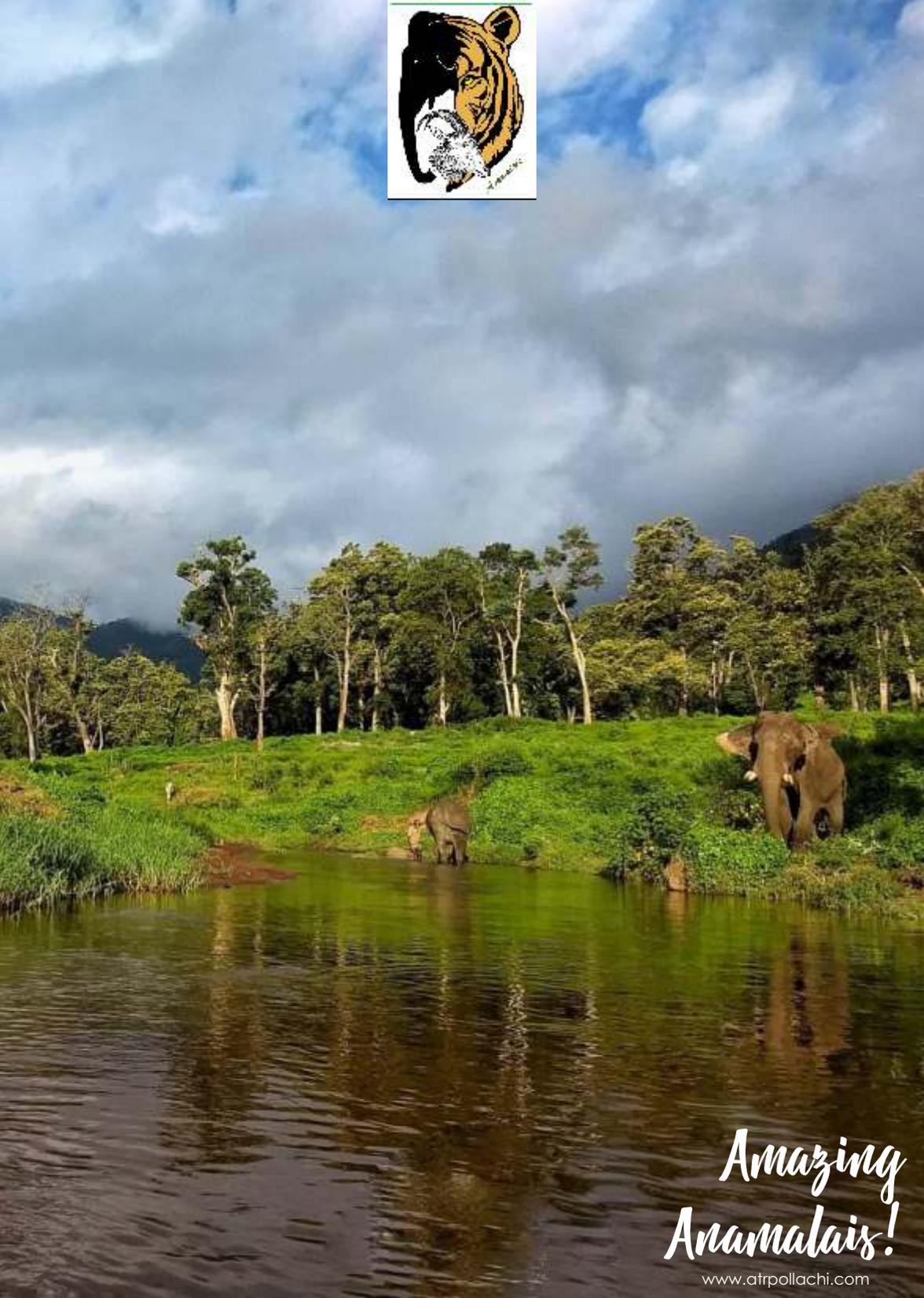
Education will give prosperity, success and security in life. The tribes either remain deprived of or negligent towards education. Compared with the literacy rates of the general population, literacy among tribal people in this area remains a bare minimum. Educational opportunities among tribal communities can lay the foundation for integrated development and well-being of the forest. One of the such tribal settlement is Old Sarkarpathi in Pollachi range. Earlier, the children were dropping out as it was located 10 k.m. away from the nearest school and due to lack of transport facilities.

The parents were unable to afford hire because of their meagre daily wages. So, the Forest department decided to step-in and facilitate the daily commute by way of providing e-vehicle.

The Deputy Director of Pollachi Forest Division, with the support from Rtn. AKS Dr. Leema Rose Martin, The Martin Group and Akruthi Trust were able to arrange a customized battery-operated Electric Vehicle for Tribal Students at Old Sarkarpathi to ferry the students to the school and back home. The E-Vehicle can run up to 60 km on a single charge and can carry around 12 to 15 students. E-vehicles have a very low maintenance cost, and can also help reduce

the carbon emission. Recently, this e-vehicle has been handed over to the Old Sarkarpathi Eco Development Committee for further maintenance and operation. For a few days, the forest department will operate the vehicle, and it has been decided to hand it over to a qualified person hailing from the settlement. The cost of the vehicle amounted to Rs. 2.86 lakhs. Apart from commute to school, this vehicle will help the community during medical emergencies, like pregnancy. It has also helped the forest department gain the confidence and trust of the community when it comes to taking care of their social needs and their well-being





Amazing  
Anamalais!

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