Arulagam



OUR DRIVING FORCE



Mr.Karthika Rajkumar President



Ms.Suryabala Rammohan Vice President



Mr. Bharathidasan S Secretary



Mr.Melkis Joseph Raja Joint Secretary



Mr.Amirthalingam. A Treasurer

Advisors



Prof. Dr.
Poornachandran K
Sahithya academy
awardee



Mr. Devaprakash M, entrepreneur



Mr. Arumugam R Zoologist



Mr. Kalairajan M Forest officer, Retired

About Us

Arulagam is a non-profit organisation based in Tamil Nadu, actively engaged in the conservation of the fauna, flora and ecosystem. Arulagam was founded in the memory and honour of our friend Mr. Arul Moli in 2002, after his demise. Our work is deeply inspired by the life of Mr. Arul Moli, an ardent nature lover and poet who believed in the importance and the immediate need for the conservation of the flora and fauna. We at Arulagam believe that every organization, from the smallest to the largest, has its own significance and they are dependent on each other for sustenance.

VISION

To create an environmentally conscious society that protects the flora and fauna for the benefit of nature and future generations.

MISSION

Conservation of nature with people's active participation through field-based action, research, education and advocacy efforts to ensure sustainable development.

SUSTAINABLE DEVELOPMENT GOALS

Arulagam is an organisation that puts all efforts towards the well-being of society and nature. We believe that every living being on the planet has equal rights. The United Nations General Assembly established the Sustainable Development Goals in 2015 with the intention of achieving them by 2023. We also adhere to the following goals in order to guarantee a sustainable future for all living beings:



Arulagam has motivated Farmers Producers Organization (FPO) and provided training on how to convert locally available materials to value added products. We do promote sustainable farming through trainings.



Evening coaching programmes for tribal children are held during the COVID epidemic to promote life skills education and personality development



Through our nursery and outreach activities we are able to conserve and propagate 100+ indigenous tree species; Arulagam gives special attention to conserve threatened vultures, *Elvira* rat, chameleon, hedgehog, bat and Asian Elephant



We have partnered with like-minded organizations to protect wildlife and preserve rare flora; encouraging sustainable farming practices, and provide livelihood opportunities for the needy people.

Our Projects

'Arulagam' is delighted to present its intended and implemented project activities for the year 2020-21. 'Arulagam' implemented the need based projects and adopted community driven development approaches towards an integrated development with a sustainable and sound environment. Annual planning meeting convened with the participation of the board of directors, staff team and representatives of the community.

Area covered

35 villages

12 taluks

8 districts

2 States

2 tiger reserves

Beneficiaries

1800

Species Conservation

Vulture

Elvira Rat

Asian Elephant

Madras Hedgehog

Indian Chameleon











Nursery & Afforestation

Tribal Welfare



Promotion of Sustainable farming

Highlights for the year

Local communities were enabled to act as protectors: 11 New gramasabhas started in The Nilgiris for claiming the Forest Rights Act.



- Quick compensation process for cattle depredation by carnivores was taken forward in Mudumalai Tiger Reserve area by joining hands with Mariamma Charitable Trust.
- Farmers Producer organisation started by partnering with Amirtaboomi
 Women's collective farm initiated Covid relief materials were distributed worth Rupees 1500 in 12 tribal hamlets. In total 790 families benefited.

> Pandemic and Wildlife

'Arulagam' utilised every challenge as a positive action in the Pandemic situation.

Bats and ant eaters were targeted for the cause of Covid19. 'Arulagam', immediately intervened and wrote a popular article and also brought this issue to the director, Indian Council of Medical and Research (ICMR)in.

The importance of vulture species was highlighted by writing an article, 'Vulture and Corona'.

- Tribal children education is ensured by the functioning of 25 Tuition centres.
- For ensuring the improved availability of safe food to vultures, an arrangement was made with the 'Gosala'. Interestingly a juvenile Egyptian vulture visited the carcass.

A Conservation Action Plan was developed for the threatened `Madras Hedgehog' and initiatives taken to establish a Community Reserve. It is the first of its kind.

> IPEN General Assembly

Mr.S.Bharathidasan, Secretary of 'Arulagam' has been selected as General Assembly member in International Pollutants Elimination Network (IPEN)

Pollution Prevention Week (ILPPW) with the support of the International Pollutants Elimination Network (IPEN). Based on our campaign we were able to achieve following field level changes

Ms.Innocent Divya, I.A.S., district Collector, The Nilgiris district, directed the government officials that the use of lead-free paints would be included in the norms while calling for Government tenders in this district. Further she instructed the District Engineer, Department of Environment, The Nilgiris, to check all the retail paint shops to ensure that only the permissible limit of lead content in paints are in stock.



Where have the sanitary workers gone?

Nature's most efficient scavengers are on the brim of extinction. We have almost lost 99% of three vulture species in India. According to the common concept, they are just scavenging birds that feed on dead carcasses, but they are actually preventing the spread of different pathogens and infectious organisms that thrive on dead carcasses. It is well acknowledged that the painkiller diclofenac is to blame for the decrease in numbers. It is a drug that is used in veterinary treatment. The drug immediately affects the vultures' kidneys when they feed on the carcasses of animals treated with diclofenac, and they die of visceral gout. And vultures are indirectly affected by poison bait and reduced food availability.



Awareness programs to general public

Target audience

Cattle herders, pharmacists, and veterinarians are sensitised about the dangers of veterinary drugs like diclofenac, aceclofenac, flunixin, ketoprofen, and nimesulides.

Informative campaigns were conducted in places where vulture populations were found. Campaigns are usually conducted on occasions where local people gather. Hoardings depicting the importance of protection of vultures were placed in tourist-attracting areas like Kodanadu View Point and selfie with vultures board is displayed at botanical garden of the Nilgiris.

On and off we are getting feedback from the awareness board. Yearly, 30 calls are received about the sighting of Vultures in their vicinity.

Vulture Safe Zones are designated areas near vulture nesting and reproduction sites. Local stakeholders sensitized about the importance of vultures in our environment and how they help to reduce the risk of diseases spreading from dead animal corpses. People are taught how drugs like diclofenac can kill vultures and reduce their population. Results of the poison bait and

reduced food availability discussed with the targeted

Celebration of Internation Vulture Awareness Day

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To mark International Vulture
Awareness Day (IVAD), a wall
painting with slogan on Vulture
Conservation - "Vultures- Heroes of
the Ecosystem", was declared open
by Mr. L.C.S. Srikanth, Deputy
Director, MTR to the public at hte
Vazhaithottam check post, and told



that area is the important breading area for vulture and hence the awareness board was erected here to sensitize the people. A series of webinars focused on the importance of vulture conservation were held in both English and Tamil.

Restoring the habitat of vulture - Tree plantation

In alliance with the 150th birthday of Mahatma Gandhi 150 *Terminalia* arjuna trees were planted. These trees are natural habitat of vulture

where they used to nest.

150 Terminalia arjuna trees were planted to commemorate Mahatma Gandhi's 150th birthday. Vultures used to nest in these trees in their natural habitat.



The events for Wildlife Week were held in accordance with Mahatma Gandhi's clean India initiative. A tree-planting campaign was held on the Segur riverbanks in Mudumalai Tiger Reserve on 2nd October. According to studies, there has been a significant drop in the number of *Terminalia arjuna* trees due to a variety of unknown factors. Volunteers from Government Arts College, Udhagamandalam, planted many plants on the riverbed. Mr. K. K. Kaushal, Additional Principal Chief Conservator of Forests and Field Director, Mudumalai Tiger Reserve (MTR), planted the first sapling in the presence of Mr. L.C.S. Srikanth, MTR's Deputy Director, Mr. S. Murali, Segur Ranger, Dr. B. Ramakrishnan, Assistant Professor, Government Arts College, Udhagamandalam, and members of the 'Arulagam'.

Vulture and Corona

An article titled, 'Vulture and corona' was published by S. Bharthidasan, Secretary of Arulagam.

Please read further from Arulagam website



https://www.arulagam.org/publications/articles/149-koronanoyt-torriyum-paru-kalukukalum

Selfie with Vulture

Vulture are birds surrounded by several myths. The scavenging nature of Vulture is negatively portrayed. A selfie with a vulture cutout was set up in Udagamandalam in order to erase the negative image of the vulture. The portrait was exhibited by Ms. Nirmala Vidyadharan, retired headmaster of Govt. high School, and the tourists were motivated to take a selfie by replacing the vulture's face with their own. This initiative drew a large number of tourists, and the majority of them loved taking selfies. Sharing these selfies on social media can help to reduce the stigma associated with vulture behaviour, as well as develop a bond with the bird.



Why Elvira Rat?

Elvira rat are creatures that can only be found in Tamil Nadu's Eastern Ghats, and they are endangered rodent species. They are members of the Muridae family. The *Elvira* rat is the only mammal from Tamil Nadu state on the IUCN red list. *Elvira* rat is classified as Critically Endangered mammal by the IUCN. They can be found in both rocky and dry deciduous forests.



In 2022?, Arulagam collaborated with Dr. Brawin and his team to undertake a field investigation at Yercadu. They used the survey to look into Elvira Rat existence. The goal of this investigation at Yercadu was to determine the number of Elvira rats in the area. A total of 432 people were interviewed, and 156 mammals and 26 rocky habitats were found. This activity is supported by Zoological Society of London.

Are the Tuskers safe?

Life of the largest land mammal of the Asian continent is at stake. Asian elephants are listed as Endangered species by the International Union for Conservation of Nature. They are known for being extremely sociable. Arulagam aspires to create a society in which animals and humans may coexist peacefully, with all living beings having equal access to soil, water, and land. Our goal is to create an environment where humans and elephants can coexist. A three-day workshop was held in Purulia, West Bengal, by Arulagam and LIFE Trust -India. The program was held in partnership with the West Bengal Forest Department from March 11 to 13, 2022. The program was sponsored by Asian Elephant support.



Our goal was to dispel widespread misconceptions about elephant behaviour and habitat among the general public. The common people have a variety of beliefs that have developed over time. The training taught them how to coexist with elephants without damaging their habitat and helped them understand elephant behaviour patterns. A total of 35 people from various villages attended the workshop. These individuals can serve as messengers, spreading the message of human-elephant coexistence.







Conserving Madras Hedgehogs

The first Madras Hedgehogs were identified in 1851. Hedgehogs are extremely unusual to see, with only a few sightings since then. Arulagam intends to establish community reserves to conserve Madras Hedgehogs. Arulagam is planning a survey to determine the presence of hedgehogs in their natural habitat, as well as educational programmes to encourage communities to conserve their habitat and increase the number of hedgehogs. To ensure the mission's success, an action plan is being developed.



Detailed reports may be read at Arulagam website.

 $https://www.arulagam.org/images/Hedgehog\% 20 conservation\% 20 report.\\pdf$

Celebrating World Environment Day

Deforestation had led to the loss of habitat for several birds, insects and many animals. Kumarguru College of Technology in Coimbatore, with the assistance of Arulagam, has established a nursery in honour of World Environment Day, which was inaugurated by Mr. Sankar Vanavarayar. The nursery intends to grow 2 lakh saplings from 65 different plant species. Arulagam aims to restore habitat for a range of animals, such as birds, butterflies, and bees, through such projects and collaborations. It also promotes tree-planting culture and ambitions of tree-planting fulfills the enthusiasts.





Tale of incredible camouflagers

'Arulagam' noticed dead chameleons on the side of the road while conducting field research for a vulture study. Our team conducted an inquiry to determine the cause of such an unusual event..

We realised that chameleons shrouded in a slew of mythology. The locals believed that the chameleons changed their colour by sucking blood. They are considered venomous creatures, and it is thought that their bite can affect the colour of the victim's body. A total of 400 villagers were educated as a result of awareness events held in two villages. The participants are taught about the true nature of chameleons, as well as their capacity to change colours. The villagers pledged to safeguard these camouflagers at the end of the session.





Tribal development projects

Tribals in Nilgiri's

Our goal is to enrich the tribals in achieving socioeconomic independence. We associate with district administration and implements the Forest Rights Act of 2006. We prioritise providing them with quality education and economic development.



Ten tuition centres in Gudalur, four in Coonoor, five in Kothagiri, and six in Pandalur Taluk have been conducted to empower indigenous tribes.

To improve the lives of tribals, 'Arulagam' established 'GramaSabhas' in four new locations (in addition to the ten already established) in Gudalur and Pandalur Taluks, two new locations in Kotagiri, four new locations in Coonoor, and one new location in Ooty. These 'GramaSabhas'



can provide as a place for people to voice their issues and discover answers to problems. For the tribes' economic development, self-help groups are being formed.

Income generation and empowerment of women in agriculture sector

Arulagam makes it possible for the women those who are working in agriculture sector to live a dignified life. We train them how to turn agricultural products into value-added goods.

Pickle-making training

Locally available ingredients such as mango, chilli and drumsticks are transformed into pickles, powders, and other products. Two villages are engaged in the process, and the women sell their product at a 50% profit in their own and surrounding communities.

Millet preparation

Millets are used to make biscuits, cookies, ragi malt, and pappadum. Local products are used to make organic products. These items have the potential to earn them a happy living. Samraj Nagar now has organic stores. Above activities are supported by the Thousand Currents.



Relief efforts and public awareness campaigns on Covid 19

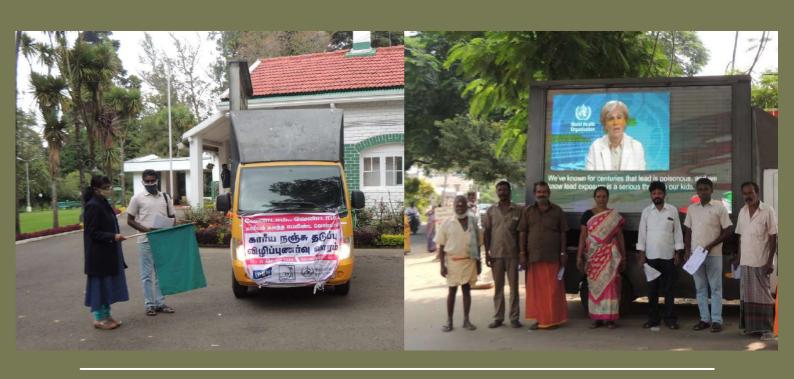
During the second wave of the Covid pandemic, Arulagam partnered with Amritabhoomi Center to carry out relief work. We provided 200 families with food packages and one-month rationing assistance. We also distributed kitchen garden seed packets containing vegetable seeds to promote the kitchen garden as a means of ensuring rural families' self-sufficiency throughout the epidemic.





Campaign against lead in paints

The amount of lead that can be used in paints is limited under the EPA Act. The quantity of lead in paint is remains significant even after the law came into force in November 2017. Toxics Link performed a nationwide survey on lead-based paints. Unfortunately, the use of lead in paints is more prevalent in Tamil Nadu. 'Arulagam' collaborated with the International Pollutants Elimination Network (IPEN) to raise public awareness about the negative consequences of excessive lead in paint. The campaign began on October 28th and finished on October 31st, on Arul's Memorial Day. Local paint shops were inspected for lead content paint under the orders of Ms. Innocent Divya, I.A.S., and were compelled to remove highly lead concentrated paints contained the lead content above the legal range. This activity is supported by the IPEN. Please read the full report in our website.



Conclusion

Arulagam has been working for the well-being of rare, endemic, endangered and threatened species on the planet for the past twenty years. We intend to increase our efforts next year and want to reach out to people all around the South India with positive messages. Every year, we hope to expand our family. We believe that by combining our efforts, we will be able to live in a better world.



SCAN CENTRE

Nilgiris Collector Innocent Divva inaugurated a ultrasound scan centre at the Ottupattarai UPHC The machine costing ₹605 lakh was donated by an IT firm to benefit pregnant women

Interim relief restrains farmers from turning predators

EXPRESS NEWS SERVICE

IN an attempt to pacify farmers whose cattle got killed in wild animal attack in the buffer zone of Mudumalai Tiger Reserve MTR, WWF (World Wildlife Fund) with the help of The Mariamma Charitable Trust, and Arulagam, an NGO work ing in the field of vulture con-servation, handing over finan-cial assistance to cattle owners as interim relief.

ers in the Nilgiris district benefitted from the initiative. A farmer would get ₹5,000 for each cow lost and ₹1,500 for a goat. The money, experts be-lieve, would help farmers tide over the initial crisis. Also, the procedure to avail compensa-tion from the forest department is lengthy- one has to obtain certification from VAO and NOC from veterinarian. Short-age of funds with the forest department sometimes delays is-

D Boominathan, landscape co-ordinator, WWF-India West-ern Ghats Nilgiris Landscape Programme said, "The initiative helped mitigate the anguish of farmers who lost cattle to wild animals. The farmers started poisoning the carcass and left it in the open to kill wild animals such as tiger and leop animals such as tiger and reop-ard. Though the practice by farmers is an offence, the farm-

attempt against the big cats. However in most such cases, vultures died after feeding

on poison-laced carcass." The Mariamma Char-The Mariamma Char-itable Trust has been financially helping farmers since 2007 in Karnataka and wanted to expand the model to Tamil Nadu. "We have been working together for over four years. As many as 113 farmers were given interim relief in reserve, and 50 of them in MTR within a year," he added. S Bharathidasan secretary

of Arulgam "In the last nine months, 50 incidents of tiger and leopard attack on cows and goats were reported in Bokka-puram, Siriyur, Moyar, Anaikat-ti, Vazhaithottam in Mudumalai Tiger Reserve, Besides helping them financially, we are also planning to help them get compensation for farmers from the forest department by arranging for certifica-tion from VAO and NOC from

Veterinarian."
"Since 2007, we have given total interium relief to 1,519 farmers in Karanataka and Tamil Nadu. I started free medical clinic to get more interac-tion with the farmers in 2000 in Karnataka. We are also working to control domestic animal births and controlling disease among domestic animals," said Sunita Dhairyam, founder of Mariamma Charitable Trust.

NGOs come up with immediate relief for livestock losses

This is to avoid retaliatory poisoning by farmers who lost their livestock in the attacks by carnivores

WILSON THOMAS UDHAGAMANDALAM

The recent killings of a tigress and five dholes (Asiatic wild dogs) within the limits of the Mudumalai Tiger Reserve (MTR) were the latest instances of retaliatory poisoning by farmers who lost their livestock in the attacks by carnivores.

Since such killings and the delay in getting the compensation could trigger farmers to resort to retaliatory poisoning, Karnataka-based Mariamma Charitable Trust has now joined hands with the Nilgiris-based Arulagam, which is into vulture conservation, and the Forest Department to offer immediate compensation to farmers for the losses.

With the joint effort of the

two NGOs, the Deputy Director of MTR (buffer zone) L.C.S. Srikanth recently handed over compensation of ₹ 5,000 each to five persons who had lost their cows in the attacks of carnivores recently.

"Mariamma Charitable Trust has been offering compensation to farmers for livestock losses in villages around the Bandipur Tiger Reserve. Now the Trust has agreed to provide a similar compensation package in MTR in coordination with Arulagam," said S. Manikandan, a biologist with Arulagam.

Vulture expert B. Ramakrishnan said that retaliatory poisoning can be fatal for carnivores like tiger, leopard, dholes and different species of vultures that scavenger carcasses.

"Out of nine vulture species in India, four namely White-backed vulture, Longbilled vulture, Egyptian vulture and Red-headed vulture are residents in places like the Moyar valley in the Nilgiris. Three species namely Eurasian griffon vulture, Himalayan griffon vulture and Cinereous vulture also visit the Nilgiris," said Mr. Ramakrishnan.

According to him, the immediate financial relief of ₹ 5,000 will help win the confidence in the farmers though the amount is not sufficient for the loss.

Mr. Srikanth said that poisoning was the reason for the deaths of the five dholes and a tigress reported in MTR in September and November this year.

"Incidents of carnivores such as tigers and leopards killing cattle usually occur in forest boundaries or inside the forest where people animals for grazing," he said.

The maximum amount offered by the Forest Department for the loss of a cow is ₹ 30,000 for which the owner of the animal has to submit an application along with the post-mortem report and a letter from the forest range officer.

"The amount can be sanctioned in a week if enough money is available with the Department under the compensation package.

Now we have around 20 applications pending," said Mr. Srikanth.

NGOs help Forest Dept. provide compensation to herders

STAFF REPORTER UDHAGAMANDALAM

To discourage herders from poisoning cattle killed by carnivores in the buffer zone of the Mudumalai Tiger Reserve (MTR), conservation NGO Arulagam with the help of Mariamma Foundation in Bandipur and the Tamil Nadu Forest Department is providing immediate monetary compensation to cattle owners.

Recently, seven herders in Vazhaithottam, Mavanallah, Anaikatti, Achakarai and Bokkapuram received compensation amounting to ₹5,000 per person for the cattle they lost to predators over the last month.

In the past, cattle killed by carnivores have been poisoned by herders, killing not just carnivores, but other wildlife.

In MTR last year, a tiger as well as five Asiatic wild dogs (dhole) were killed in suspected poisoning incidents, while vultures too have died in previous years from consuming poisoned carcasses.



Forest Department official hands over a cheque to one of the herders whose cattle was taken by a carnivore.

Top officials of the Department, including Deputy Director of MTR (Buffer Zone), P. Arunkumar, local rangers and members of Arulagam were present at the event to hand over the compensation.

S. Manigandan, research scholar at Arulagam, told *The Hindu* that the initiative will not only help protect carnivores such as tigers and leopards, but also scavengers like the critically-endangered species of vultures that inhabit the Sigur, as well as other wildlife such as

striped hyenas and dholes. "Arulagam is also working towards increasing the compensation amount awarded to the herders. The initiative has been ongoing since last year to provide timely compensation to cattle owners," said Mr. Manigandan.

Field Director of MTR, D. Venkatesh, said that such efforts, along with the Forest Department's own compensation package of ₹30,000 for cattle preyed on by carnivores, will lead to fewer instances of retaliation by the local public against wildlife. The compensation provided by the Forest Department will be given to the herders separate from the initiative by Arulagam, officials said.

"When a cattle is killed by a predator, we usually request the owners to hand over the cattle to us so we can leave it inside a reserve forest for scavengers. The Forest Department hopes that such initiatives can help wildlife and also involve local communities in their protection," he said.



பாறுக் கழுகைக் கண்டா வரச்சொல்லுங்க!

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நடிய பிடியில் பிடிய முற்ற முற்ற படியில் முற்ற முற்ற மற்ற முற்ற மற்ற முற்ற முறி முற்ற முற் Leing no olidi graning i achdiri Olima 22 a aghana acana anna achdiri

விட்டட்டுள்ளது. இறில் 10 பாலூட்டிகள், 3 ஊர்வள, 3 புறைவகள், 2 நிறில் வாழலிகள், 3 பிளினம், தவா ஒரு பூச்சி வால், இரால் வகை, பலர உயிரி தெ. அதியாள இடம்பெற்றுள்ளன. இநாடுகளைச் சோந்தட்ட நடியில் இதியாவைச் சேர்ந்த இப்படைக் கானட்டும் காட்டு ஆக்கைநடம் இடம்பெற்றுள்ளன.

இணைவுகளில் பாஜு

இணைவுகளில் பாறு இன்னும் 50 ஆண்டுகள் வழித்துப் பாறுக் வழுகையாற் நேடி இரிகியாய் மாறும் புறப்பட வேண்டிய தினை வரைவு என்று வுக்குகளில் ஆர்க் நினை வரைவர் இருக்க இந்திய அரக இதுகள்கு திடப் வகுத்துல் வெய்கபாட்டைக் தொடர்கியுள்ளது. அக்பட அணிந்தனை செயர்திட்டமும் சேல் – வக்கர்ஸ் (Saving Asiana Vulniuras from Education) என்கிற அடைப்பால் முன்னொடுக்கப்பட்டுள்ளது. நம் கீட்டிக் மூன் கொடியும் பினைந்தின்னிக் வழுகைப் பாறுக்குமுன்டா எனக் கேட்டுப் பாறுங்கள், நின்றும் செயர்களில் கேட்டுப் பாறுங்கள், நின்றும் செயர்களில் வந்து வயற்குகள், அதன் கோங்குக் தேர்ப் நினையுக்கு வந்தத் எனக்கும் பந்து வயற்குகள் தேர்ப் அதன் கோங்கள் தோட்டிய எறுக்களின் அதன் கோங்கள் தோட்டிய வருக்களின் அதன் கோங்கள் தோட்டிய அதன்களினர்க்

கொட்டின்போல் பெரிநாக இருக்கும்.
ஆந்த எருகம் இருந்தோத் ஆற்றோற்றில் கொண்டுபோத் கடத்தினோல். அதன் தோலைப் பெரியாம் ஒருவர் கிறிந்து எறித்தக்கொண்டிருந்தப்பாது வளர்கிறந்து பாற்குக்கொண்டிருந்தப்பாது வளர்கிறந்து பற்குக்கொண்டிருந்தப்பாது வளர்கிறின் கடக்கின் அதிகே எற்று தமாற்றார். அறைக்க கடக்கின் அதிகே எற்று தமாற்றார். அறைக்க முன் அப்புறமைகளை நாள் பார்ந்ததில்கை

முள் ஆட்டத்தைகளை நாள் பாறுத்துக்கைய், அவை என் உயர்த்திற்கு இந்துக் ஆல்சத்தை ஈற்படுத்தியது. வி.டுக்கு ஓடி வந்துவிட்டேன், அவர்களிய கேட்டு, அதன் கெயரைத் தெரிந்து அதன் டெய்காரத் தெரிந்து கொண்டேன், பற்கையாளை தோக்குவதில்

பற்காகளை தேச்சுத்தின் ஆர்கம் ஏற்பட்டபோறு 1991 பே மாதத்தில் நின்றிக்கல்லில் உள்ள தோல் தொழிற்சாவலகளைச் சுற்றிரும் அமைக்கிருந்த

தோய் தொடுற்றாயைகளைச் சிற்றும் இருந்து அமைந்துக்கு அம்று கொண்டுக்கு அம்றுக்கு அம்று அம்றுக்கு அம்று அம்றுக்கு அம்று அம்றுக்கு அம்று அம்றுக்கு அம்றுக்கு அம



_ மஞ்சள் முகப் பாறு

மாலையில் சாடி ஆராய்சியாரர் போகாரைந்த காட்டும்? சுழுவரு அகி புறாவ ஆர்வரை அல்லா ஆலியோர் உடன்றா கேளி ஆல்லை! பாக்கச் சென்றிருந்தப்பாது எறிக்குக்குந்த ஒத்துடமானுமில் பாறக்கழுகை கட்டம் நாய்கியிருந்தது என் மாக்களை நிறாரும்யது. அத்வே காட்சி அதன் பெள்ளை இன்றையது. அத்வே காட்சி அதன் பெள்ளை இன்றையது. அத்வே காட்சி அதன் பெள்ளை

Medius and Dayley

முற்றன்டுகளுக்கு முன் நிகர்ப் பயணமாகக் கிறக்கு மண்குக்கும் பயணும் பெற்ற பணத்தொடரம் சந்திக்கும் பயணு மடிக்கரில் பறகையகளை நேர்க்குவந்தாக உ சந்திரசேகருடன் சென்றேன் பறகையகள் மும் பயண்டியத் பறக்கின்றனமான என தம்பட்டோது தன்படனத்த பாந்தப்படும் தேதயாக நடத்துகேன்றோம். நட்போது பாசிக் புள்ளியாக ஈரோ நன்று கடியத்தத் நிலையில் தென்படத், தொலைநாக்கியைத் திருக் கற்றுநோக்கத்தான். என்பைத் தொடக்கியைத் தமற்றின் என்னவில்கை 105-வதக் தொடத்த கிட்டியத் நிலைந்தோக், என்னவில் 12 ஆண்டுகள் வநித்த அப்பாதுரங்க இந்தப் புளை இனந்தை பின்றுப் பார்க்கும் காட்டிக் கட்டியத் நடித்த படியாதுரங்க இந்தப் புறைவறினர் இன்றுப் பார்க்கும் காட்டிக் கட்டியத் நடித்தில் தென்றுப் பார்களும் காட்டிக் கண்றுற்ற நிறிக்கும்குனர் இங்குக்குக்கள் குறகுப் பாறை கழுகு கொடியாக கழக பணை என

Steep greenspann galgergen reger innen, edge Gen er, edge Gener inn milde som et de generale நடக்களை நடக்கள் நடக்கள் நடக்கள் கடக்களையுத்த பஞ்சன் நடகப் பாறு என்ன ஆனது என்பது குறித்துத் தெரிந்துகொள்ளத் சென்றபோது பஞ்சன் நுகப்பாறுமன் அது குடிக் கையிலிருக்கு உண்கைய உண்பதுகோன்ற ஓவியம் மடக்கோளுக்கிறுக்கது.

கற்போதைய நெலை!
உள்ளில்கும் பெருங்கழுத் இனந்தில்
23 சிறப்பின்பதன் உள்ளன. இந்தியாவில்
ஒன்பது வரைப்பு அதிக நடுக்கு கொண்டிறதுகும்
பாறு. வருக்கழுக்கும் போது நடியில்
பாறு. மற்கர்வுக்கும் பாறு ஆகிய நான்கு
சிறப்பினர்களுக்கும் பாறு ஆகிய நான்கு
சிறப்பினர்களுக்க பாறு ஆகிய நான்கு
சிறப்பினர்களுக்க சாலப்படுகின்றன.
இங்கியந்தின் எழித்துகத்தில் காணப்படும் 4
கைவுயின் அதிகபாவத்தில், அறுக்கியதுக்க குறுவாவில் நிறப்புக்குக்குக்களை மட்டுமே
உள்ளனக்கதுமானம் இருக்குக்குக்கும்
நேரம் பரவாகல் காக்கின்றன. இதனாக,
நடைப்பான் நோய் பறுகிரைக்கும், அறுகிறதேக்குக்
நேரம் பரவாகல் காக்கின்றன. இதனைக்கும்
நேரம் பரவாகல் காக்கின்றன. இதனைக்கும்
நேரம் பரவாகல் காக்கின்றன. இதனைக்கும்
நடியில் உள்ளியர்கள் கொறுவியில் இக்கப்படுகின்றன.

அடுவுக்குக் காரணம்!

யாடுகளுக்குக் செறுந்திய யல்றிகளான!
மருத்துகள், இருத் லினங்குகளின் பிறு
குறைக்கப்படும் நூற்கன், இரை புற்றக்குறை
ஆகியகைப் இரைப்பின் அறிவக்குப் பெரியும்
காரணமாய் அரைப்பின் அறிவக்குப் பெரியும்
காரணமாய் அருவக்குப் கொருமாக இருந்தில்
கூறிலக்கு முகர்களைக் காரணம் மாடுகளுக்குக்
செறுத்திய கடக்கோரினாக் மன்றிகாரணர்
மருத்துனன், மத்திய அரசு அம்குழினதக்
காற்றகை, பான்றாருந்து தடைசெற்றது
கூறினும் இம்முந்து தடைசெற்றது
அலிரும் இம்முந்து
அலிரும் இம்முந்து
படித்தினர் என ஆரங்க்கி முறிகளைக்கள்
கேறிவிக்கின்றன் என ஆரங்கிக் முழுகுறகக்
தெரிவிக்கின்றன் மருக்குக் கால்றகைப்
பயன்படி அலிருந்து விலக்கி முன்னேறுமாகத்
தெரிவித்தி

தினுகிறது.

யாடு செத்தால் கண்டிக்கைடல் தித்தானே போடுறது. பாறுக் கழுகா தின் கிறது என்கிறது என்கிறது என்கிறது. பாறுக் கழுகா தின் கிறது என்கிறது வடக்கோறினாக முறுத்துகள் பெல்லத் தனைகள்ட்டி வருக்குறைப் பறக்களித்து மாறுகின்றன. என்கே அவற்றைப் பறக்களித்து மாறுகிற்றன. அருக்குற்றவு அவற்கள் வறுகின்றன. அருக்கிறது பறகுகிறது வருக்கிறது. அருக்கிற மாறுகிற பறகுகிற பறக்கிற படிற்கிற படிற்கிற படிற்கிற படுக்கிற படுக்கிற படிற்கிற படிற்கிற படிற்கிற படிற்கிற படுக்கிற படுக்கிற படுக

இபற்கையாக இறந்த கால்நடைகளையும் கேடு பயக்கும் ஈந்த மருந்தும் சேலுக்குப்படாத கால்நாட்களையும் புறைக்காமல் ஊருக்கு ஒதுக்குப்புற்றாய் கால்நாட்களுக்கு Bernara Cari Gall and gales Lunas antisoures and a similar annual of Serve control of the Server

pen pálpai pypugai anjás Bási penademi potuga fadat z dítátamágád a pla tesimologa muta, fadátaki üzpazantá gárpta வினங்கும் பாறுக் கழுகுகளை அதிய விடாவ் காப்போம்.

பாதுக் களுரு பாது காப்பு செயற்பாட்டாளர் தொடர்புக்கு காக்குணைக்குறோக்கை

விடைபெறத் தொடங்குகிறதா கரோனா? 👼 நகைய் வாடி

Carcasses from goshala for Mudumalai's scavengers

Study-based conservation effort to ensure availability of safe food for endangered vultures

ROHAN PREMKUMAR

To increase the availability of food for vultures in the Mudumalai Tiger Reserve (MTR), the Forest Department is allowing dead cattle from a goshala (cow shelter) located nearby to be left for the scavengers. The goshala is located in Mavanallah, in the MTR buffer zone.

The decision was taken after conducting a thorough study, along with field inspections. Medical records and veterinarians from the Animal Husbandry Department confirmed that the goshala was not using Non-Steroidal Anti Inflammatory Drugs (NSAID) that are harmful to wildlife, including vultures. Mudumalai is home to three



Carcasses from one goshala will be left for scavengers, forest department officials said. • SPECIAL ARRANGEMENT

critically endangered, and one endangered, species of vultures.

B. Ramakrishnan, assistant professor, Department of Zoology and Wildlife Biology at the Government Arts College, Udhagamandalam, justified the decision.

"Consent was given only

after visits to the goshala over a period of many months by researchers and Forest Department officials, after the perusal of their medical records, [and of] lists of drugs used to treat cattle, and after consultations with local veterinarians who treat the cattle there," he said.

"The breeding success of vultures can vary due to a number of factors, with the most important being food availability," Mr.

Ramakrishnan said. A pair of mating vultures may even abandon their nest due to a lack of food, he pointed out.

"It is for this reason that this initiative may prove to be extremely important," said S. Bharathidasan, secretary of Arulagam, a conservation NGO which has been working on vulture conservation in the Sigur plateau.

According to him, each month, two or three of the cattle at the goshala die of natural causes. Only those cattle that die of old age and natural causes will be left to the scavengers.

"The goshala is incredibly

well-run and has maintained meticulous records for its cattle, which made this effort even possible," said Mr. Bharathidasan.

The carcasses will be left inside the huge property of the goshala itself, which is away from human habitation and has a regular movement of forest staff, said S. Manigandan, a research scholar studying vultures from the Government Arts College in Udhagamandalam.

The breeding season for vultures starts from November and extends to March.

MTR Field Director K.K. Kaushal said other species such as wild boar, dhole and the striped hyena, would also benefit from the initiative.

Sigur turns a hotspot for migratory vultures

The sighting of Eurasian griffon marks the third different migratory species of vulture recorded in the region this year

ROHAN PREMKUMAR

Soaring high among the clouds, a kettle of whiterumped vultures and redheaded vultures, residents of the Sigur plateau, circle over the carcass of a dead animal. On closer inspection, research scholar, S. Manikandan, studying the vultures spots a bird noticeably different from the other vultures. "I immediately started taking pictures and later confirmed it to be a Eurasian griffon (Gyps fulvus)," said

Mr. Manikandan.

The sighting of the Eurasian griffon, a winter migrant to the Sigur plateau, marks the third different migratory species of vulture recorded in the region this year.

 Bharathidasan, secretary of Arulagam, a conservation NGO working on protecting vultures, said that apart from the Eurasian grif-



A cinereous vulture (Aegypius monachus) sighted in the Sigur plateau. *Secial ARRANCEMENT

fon, conservationists have also spotted the Himalayan griffon vulture (Gyps himalayensis), as well as the cinereous vulture (Aegypius monachus), in the Sigur plateau.

"We were on a routine trip to the Sigur to document the vultures in the region when we spotted the Eurasian griffon, which is being recorded for the second time in the region since 2017," said Mr. Manikandan, a research scholar studying vultures at the Government Arts College in Udhagamandalam.

Previously, a Eurasian griffon was recorded near Masinagudi by D. Gajamohanraj in 2017. Vultures such as the Eurasian griffon and the Himalayan griffon, particularly juveniles, are known to travel thousands of km during the winter before heading back to their home range during the summer, said B. Ramakrishnan, assistant professor at the department of zoology and wildlife biology at the Government Arts College in Udhagamandalam.

"This behavioural trait is seen particularly among juveniles, who travel to different parts of Southern India during the winter, possibly to take advantage of the ideal climate and availability of food in the region," said Mr. Ramakrishnan. Interestingly, despite the presence of other vulture species in the region, including the red-headed vulture (Sarcogyps calvus) and the white-rumped vulture (Gyps bengalensis), the winter migrants seemingly have little to no conflict with the local resident vulture populations, said Mr. Bharathidasan and B.Ramakrishnan.

Captive vultures

Conservation methods could take advantage of this behaviour to reintroduce captive vultures back into the wild, opined Mr. Bharathidasan. "Around four years ago, a cinereous vulture was rescued in Kanyakumari and is currently being kept in captivitv. Efforts could be taken to reintroduce the individual back into the wild, as there are plans to set up a vulture rescue, rehabilitation and breeding centre in Mudumalai, and could be an ideal learning and training process for future conservation and rehabilitation efforts, said Mr. Bharathidasan. "The presence of so many vulture species in a single limited landscape is an indicator that the Sigur is a hotspot for vultures and needs continued protection," said Mr. Ramakrishnan.

Partners in colloborations

Home Rule Globally		Habitat Trust		
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Cultural Survival		Psyco Trust		
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International Pollutants Elimination Network (IPEN)				
Kumaraguru College of T	echnology -			
Care Earth Trust				
Shanthi Social Service Sc	ociety			
Suguna Foundation				

RECEIPTS AND PAYMENTS FOR THE YEAR 2020-21

Receipts Particular	Income Cost (₹)	Payments Particular	Expenditure Particular (₹)
Grants from doners	1,44,94,134	Programme expenses	24,05,988
Donation	17,34,983	Nursery activity	11,69,912
Member's subscription	3,000	Administrative expenses	3,90,893
Bank interest	2,65,808	Capital expenses	53,010
Total	1,64,97,925		40,19,803

(Balance amount will be carried forward to ongoing project. Detailed audit report can be availed by requesting, Auditor: John Peter Raj)

Arulagam is registered Under Tamil Nadu Societies
Registration act 1975, Regn No; 156/02,
Regd u/s 12A, 80G of the IT Act;
Regd under FCRA to accept foreign donations

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